PART A

IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F 179
PART A

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CONTENTS

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numberical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D.C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If the count is four or less, the data are considered insufficient and no median value is computed.

2. For the F2 layer, h'F or foEs, if the count is from five to nine, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as the count is at least five, the median is not considered doubtful. A count of at least 5 is considered sufficient for an h'Es median.

3. For all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

Ordinarily, a blank space in the fEs or foEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F2 or h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.

b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.

c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

d. The tables may contain median values of either foEs or fEs. The graph of median Es corresponds to the table. Percentage curves of fEs are estimated from values of foEs when necessary.

PREDICTED AND OBSERVED SUNSPOT NUMBERS

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number										
	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949
December	137	150*	150*	150	42	11	15	33	53	86	108
November	137	150*	150*	147	35	10	16	38	52	87	112
October	139	150*	150*	135	31	10	17	43	52	90	114
September	141	150*	150*	119	30	8	18	46	54	91	115
August	142	150*	150*	105	27	8	18	49	57	96	111
July	141	150*	150*	95	22	8	20	51	60	101	108
June	143	150*	150*	89	18	9	21	52	63	103	108
May	146	150*	150*	77	16	10	22	52	68	102	108
April	150*	150*	150*	68	13	10	24	52	74	101	109
March	150*	150*	150*	60	14	11	27	52	78	103	111
February	150*	150*	150*	53	14	12	29	51	82	103	113
January	150*	150*	150*	48	12	14	30	53	85	105	112

*This number is believed representative of solar activity at a maximum portion of the current sunspot cycle.

The latest available information follows concerning the corresponding observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1958.

Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	197	200	201	200
1958	199	201	201	197	191	187	185	184	183	181	179	179

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
- Bunia, Belgian Congo
- Elisabethville, Belgian Congo
- Leopoldville, Belgian Congo

Universidad Mayor de San Andres:
- La Paz, Bolivia

British Department of Scientific and Industrial Research, Radio Research Board:
- Slough, England

Defence Research Board, Canada:
- Baker Lake, Canada
- Ottawa, Canada
- Resolute Bay, Canada
- Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
- Formosa, China

Instituto Geofisico de Los Andes Colombianos:
- Bogota, Colombia

Danish National Committee of URSI:
- Narsarssuak, Greenland

The Finnish Academy of Sciences and Letters:
- Sodankyla, Finland

Ionospheric Institute, Breisach, Germany:
- Freiburg, Germany

National Institute of Geophysics, City University, Rome, Italy:
- Rome, Italy

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
- Akita, Japan
- Tokyo (Kokubunji), Japan
- Wakkanai, Japan
- Yamagawa, Japan

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
- Cape Hallett (Adare), Antarctica
- Christchurch, New Zealand
- Rarotonga, Cook Is.

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
- Oslo, Norway
- Tromso, Norway

Manila Observatory:
- Baguio, P.I.

South African Council for Scientific and Industrial Research:
- Johannesburg, Union of South Africa

Ebro Observatory:
- Tortosa, Spain

Research Institute of National Defence, Stockholm, Sweden:
- Kiruna, Sweden
- Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
- Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
- Schwarzenburg, Switzerland

United States Army Signal Corps:
- Adak, Alaska
- Okinawa I.
- Thule, Greenland
- White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
- Anchorage, Alaska
- Byrd Station, Antarctica
- Ellsworth, Antarctica
- Fairbanks (College), Alaska (Geophysical Institute of the University of Alaska)
- Huancayo, Peru (Instituto Geofisico de Huancayo)
- Little America, Antarctica
- Maui, Hawaii
- San Francisco, California (Stanford University)

TABULATIONS OF ELECTRON DENSITY

Reduction of hourly ionospheric vertical soundings to electron density profiles is currently a part of the systematic ionospheric data program of the National Bureau of Standards. Scaled data for this purpose are being provided by stations operated by NBS and the U. S. Army Signal Corps. For the present, the hourly profile data from one NBS station, Puerto Rico, are being provided in the CRPL-F Series. These data are in place of the other quantities formerly provided by this station. The very considerable task of scaling the ionograms for this purpose is undertaken by Mr. T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station (Ramey AFB, P. R.); the computations are performed at the NBS Boulder Laboratories. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

Quantity	Units	Remarks
Electron Density (N)	(electrons/cm^3 $x10^{-3}$)	Body of table; given at each 10 km of height.
NMAX	" " "	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	(electrons/cm^2 column $x10^{-10}$)	Obtained by integration of the profile between the limits HMIN and HMAX.

The final tabulations are headed "AVERAGE ELECTRON DENSITY." These give the arithmetic mean electron density at each height. Before averaging, the hours are identified with the magnetic character figure Kp. The data for those hours for which Kp falls below 4+ are put into one average; the others are put into another average. Quiet averages usually result in smooth N(h) profiles, but the disturbed averages must be used with care. This is due jointly to the usually low count in the disturbed category, and to the inconsistency between disturbed days.

Individual profiles are extrapolated above HMAX by a Chapman distribution of 100 Km scale height. Such an extrapolation is required to get reliable averages near the mean; this extrapolation has also been shown to be in good agreement with present ideas of the F region above HMAX. Thus, for what they are worth, the extrapolations are shown in the averages to 950 Km. The quantities HMIN, HMAX, NMAX, AND SHMAX are averaged in a similar way. The additional quantities tabulated for each hour are:

COUNT -- The number of profiles in each average.
SHINF -- The total electron content of the ionosphere based upon the extrapolation described above. The units are electrons/cm^2 column x 10^{-10}.

ELECTRON DENSITY

PUERTO RICO 60 W 1 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S			A	
HMIN	259	253	233	222	240	317	237	113	112	117	108	110
HMAX	371	350	352	341	423	457	359	340	319	327	334	353
SHMAX	1062	723	915	728	680	733	662	1355	1808	2222	2679	3183
KM												
460						774						
450						772						
440						764						
430					661	750						
420					661	729						
410					655	702						
400					642	671						
390					623	628						
380	1528				595	573						
370	1528				562	500						
360	1510		1191		522	417	814					2790
350	1464	1191	1191	875	477	323	809					2789
340	1389	1176	1179	875	432	209	795	1316			2607	2767
330	1285	1130	1151	869	383	112	771	1309		2430	2605	2718
320	1157	1050	1107	853	335	40.2	737	1291	1907	2421	2577	2641
310	1004	946	1050	827	281		695	1260	1896	2376	2519	2533
300	834	814	969	794	229		637	1216	1861	2294	2430	2400
290	625	667	865	749	179		573	1167	1801	2173	2306	2244
280	362	508	754	691	139		485	1104	1714	2032	2161	2053
270	83.8	286	619	625	101		389	1013	1606	1826	1969	1846
260	12.4	65.7	446	532	67.6		262	917	1462	1601	1747	1631
250			143	437	42.5		104	804	1308	1368	1534	1425
240			49.6	310			40.2	691	1143	1119	1301	1216
230				71.4				557	975	896	1096	1027
220								417	794	716	903	875
210								310	625	573	742	742
200								205	498	469	608	643
190								148	389	396	508	549
180								106	302	330	425	469
170								81.3	235	281	356	400
160								70.8	187	237	305	346
150								67.4	156	204	262	298
140								64.0	136	178	228	259
130								60.7	122	164	201	229
120								49.6	112	127	185	209
110											112	83.8

ELECTRON DENSITY

PUERTO RICO 60 W 1 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A	A	B					
HMIN	108	110	109	109	110	107	238	246	247	252	274	268
HMAX	334	353	363	369	365	373	387	379	381	421	388	364
SHMAX	2850	3002	2908	2711	2590	2497	1922	1686	1481	1874	1343	1102
KM												
430										1786		
420										1786		
410										1777		
400										1753		
390							2032		1697	1715	1727	
380						2032	2027	1907	1697	1662	1719	
370			2362	2193	2161	2031	2004	1898	1686	1595	1688	1640
360		2716	2360	2185	2158	2017	1961	1869	1654	1514	1634	1638
350		2715	2342	2157	2139	1986	1899	1819	1603	1423	1556	1611
340	2941	2689	2301	2108	2102	1937	1818	1744	1528	1303	1465	1556
330	2937	2631	2237	2040	2045	1866	1722	1657	1436	1171	1341	1465
320	2898	2536	2150	1945	1960	1786	1598	1542	1329	1019	1162	1362
310	2814	2415	2042	1834	1863	1688	1446	1401	1198	854	960	1208
300	2684	2260	1907	1708	1751	1568	1260	1224	1035	698	754	1027
290	2511	2087	1756	1570	1626	1446	1073	1050	861	540	508	794
280	2294	1887	1604	1420	1487	1312	854	834	679	362	112	508
270	2032	1688	1446	1274	1341	1186	608	625	492	198		44.9
260	1756	1483	1291	1111	1182	1050	362	362	240	71.4		
250	1474	1265	1164	982	1019	928	161	83.8	49.6			
240	1240	1096	1035	861	875	794	26.3					
230	1027	932	907	754	742	679						
220	854	794	804	661	631	573						
210	716	679	709	587	540	485						
200	616	591	634	524	454	398						
190	534	514	557	465	389	329						
180	465	453	477	410	325	268						
170	408	395	406	351	276	223						
160	358	348	351	300	234	189						
150	318	306	302	253	204	161						
140	279	266	260	227	183	140						
130	246	238	236	213	172	126						
120	221	222	222	203	163	119						
110	143	49.6	60.0	127	12.4	112						

ELECTRON DENSITY

PUERTO RICO 60 W 2 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S				A
HMIN	246	244	229	222	243	235	219	111	109	106	109	109
HMAX	351	333	323	338	362	332	330	295	316	336	320	337
SHMAX	959	768	682	544	486	387	392	758	1392	2198	2103	2521
KM												
370					643							
360	1446				643							
350	1446				636							
340	1430	1290		716	621	590				2032		2500
330	1387	1289	1050	713	597	590	540			2028		2491
320	1314	1264	1049	698	569	582	536		1290	2004	2294	2445
310	1218	1209	1035	672	524	563	524		1288	1959	2274	2362
300	1096	1124	1003	634	462	533	503	917	1274	1889	2215	2234
290	917	1004	954	585	389	495	477	915	1247	1803	2109	2080
280	698	848	889	527	298	441	438	902	1207	1692	1969	1889
270	446	679	804	454	189	371	389	875	1155	1556	1803	1708
260	179	446	679	380	83.8	286	329	834	1096	1394	1612	1512
250	44.9	71.4	477	286	43.3	143	251	781	1012	1224	1404	1308
240			112	189		46.5	143	709	926	1065	1191	1096
230			12.4	77.6			60.0	634	834	903	975	932
220							5.5	549	745	768	794	784
210								446	643	643	643	670
200								310	540	540	532	582
190								179	446	462	454	500
180								94.5	353	389	389	429
170								74.5	274	325	335	362
160								67.5	209	272	290	310
150								62.5	161	231	253	262
140								56.0	127	204	222	229
130								48.6	109	174	182	214
120								43.3	102	154	169	205
110									83.8	127	112	143

ELECTRON DENSITY

PUERTO RICO 60 W 2 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A	A		S				S
HMIN	110	109	110	110			227	222	232	254	280	252
HMAX	360	362	379	369			377	378	404	414	398	360
SHMAX	3018	2900	3119	2856			1988	1742	1575	1469	1281	1129
KM												
420										1612		
410									1612	1610		
400									1610	1593	1727	
390									1595	1558	1718	
380			2716				2193	1876	1562	1503	1681	
370		2571	2704	2643			2187	1869	1513	1430	1617	
360	2680	2571	2663	2630			2157	1840	1446	1349	1523	1846
350	2665	2547	2592	2584			2102	1788	1359	1240	1401	1823
340	2620	2490	2492	2505			2021	1714	1260	1107	1255	1756
330	2546	2396	2354	2389			1917	1617	1143	960	1065	1644
320	2442	2279	2194	2244			1786	1501	1016	807	854	1493
310	2307	2124	2011	2069			1636	1356	861	643	625	1291
300	2142	1954	1786	1866			1478	1208	729	477	389	1004
290	1948	1769	1578	1646			1281	1050	591	310	161	698
280	1747	1593	1383	1425			1073	875	462	170	12.4	417
270	1537	1394	1167	1224			794	698	335	83.8		179
260	1341	1226	990	1050			540	540	229	40.2		60.0
250	1159	1080	848	889			310	403	135			
240	990	939	745	742			119	262	60.0			
230	848	820	657	634			40.2	135				
220	735	716	585	553								
210	634	625	529	489								
200	553	549	477	435								
190	483	483	427	384								
180	423	427	375	335								
170	371	380	325	278								
160	325	335	267	243								
150	276	291	235	219								
140	243	251	219	203								
130	229	232	210	193								
120	211	219	202	184								
110	49.6	127	71.4	60.0								

ELECTRON DENSITY

PUERTO RICO 60 W 3 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S		B		
HMIN	239	251	231	209	232	260	299		110	107	109	110
HMAX	356	366	355	348	360	374	410		305	317	319	344
SHMAX	1000	947	902	786	500	419	448		1350	1912	2012	2529
KM												
410							625					
400							619					
390							602					
380						608	573					
370		1341				607	535					
360	1420	1337	1167		661	596	482					
350	1415	1312	1165	875	655	573	423					2260
340	1388	1265	1148	871	637	540	353					2258
330	1333	1195	1113	857	608	495	278					2236
320	1256	1107	1062	830	569	432	189			2032	2161	2189
310	1154	975	990	794	519	362	97.2		1556	2024	2145	2117
300	1019	814	907	744	454	286	12.4		1552	1986	2092	2020
290	861	625	794	685	389	198			1526	1915	1994	1907
280	679	417	667	625	316	104			1474	1816	1861	1752
270	446	179	524	560	240	54.8			1394	1683	1702	1588
260	198	71.4	375	492	155				1296	1524	1537	1429
250	83.8		198	417	88.3				1159	1341	1341	1240
240	12.4		71.4	335	46.5				1027	1175	1159	1073
230				248					875	982	960	932
220				119					716	814	794	807
210				12.4					573	679	655	698
200									446	551	551	599
190									362	462	465	516
180									278	382	396	446
170									205	316	344	383
160									148	258	298	331
150									118	219	262	290
140									109	182	233	251
130									104	160	201	219
120									98.7	149	181	198
110									12.4	119	112	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 3 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL					A	A	A	A				
HMIN	110	110	107	110	108	109			239	257	269	300
HMAX	359	355	362	354	351	363			387	408	422	426
SHMAX	2822	2806	2875	2738	2452	2205			1288	1205	1197	1020
KM												
430											1393	1341
420											1393	1338
410										1446	1381	1316
400										1439	1351	1274
390									1500	1411	1304	1210
380									1496	1361	1240	1133
370			2500			1876			1472	1287	1165	1019
360	2430	2500	2500	2500	2227	1875			1428	1201	1061	875
350	2420	2497	2481	2498	2226	1861			1364	1084	932	704
340	2382	2466	2435	2471	2212	1829			1277	960	794	540
330	2318	2406	2361	2413	2173	1778			1175	820	643	362
320	2222	2315	2254	2326	2110	1705			1061	679	477	198
310	2109	2197	2118	2201	2020	1621			917	540	310	83.8
300	1969	2048	1969	2060	1907	1523			774	375	179	
290	1803	1872	1803	1887	1771	1411			608	240	97.2	
280	1631	1688	1612	1702	1620	1291			462	127	53.1	
270	1446	1501	1425	1512	1446	1182			298	65.7	5.5	
260	1257	1308	1240	1321	1281	1061			161	19.3		
250	1119	1143	1050	1143	1127	932			71.4			
240	975	990	903	975	975	807			12.4			
230	854	848	781	834	820	691						
220	754	735	679	716	691	573						
210	661	643	601	616	573	477						
200	587	567	540	532	477	380						
190	514	503	487	465	396	298						
180	446	446	437	400	329	235						
170	389	398	389	346	272	189						
160	335	354	335	295	232	158						
150	296	314	294	251	196	138						
140	262	279	256	216	172	126						
130	234	248	227	195	158	120						
120	219	225	209	185	150	113						
110	12.4	49.6	161	83.8	127	60.0						

ELECTRON DENSITY

PUERTO RICO 60 W 4 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	265	241	211	209	218	222	261	109	108	108	110	110
HMAX	374	329	317	362	348	358	381	309	306	315	333	343
SHMAX	914	754	590	538	412	399	323	795	1388	1908	2266	2692
KM												
390							432					
380	1393						432					
370	1391			590			427					
360	1364			590		461	415					
350	1307			585	557	460	395					2500
340	1221			574	553	453	370				2193	2499
330	1111	1290		555	539	441	335				2192	2477
320	960	1278	854	527	514	423	295			1969	2170	2428
310	774	1235	851	494	477	401	249	939	1528	1966	2119	2352
300	573	1161	833	455	432	374	198	933	1524	1942	2041	2245
290	375	1061	802	412	378	339	143	913	1501	1893	1929	2118
280	170	903	754	356	320	295	88.3	879	1456	1821	1799	1960
270	49.6	716	694	304	257	240	49.6	838	1391	1727	1631	1769
260		477	616	246	198	186		770	1304	1618	1446	1578
250		198	508	192	135	127		688	1204	1465	1257	1362
240			375	127	79.7	71.4		585	1073	1301	1073	1143
230			219	79.7	49.6	42.5		467	932	1096	917	960
220			71.4	47.7	12.4			362	774	875	774	794
210				6.8				262	608	698	670	655
200								192	467	540	582	551
190								140	353	439	500	471
180								109	262	362	425	408
170								88.8	204	300	356	357
160								76.6	157	249	300	317
150								69.5	129	209	258	278
140								65.7	114	179	222	240
130								61.9	107	166	197	213
120								54.2	102	153	181	191
110								12.4	83.8	112	97.2	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 4 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			B				B					
HMIN	108	108	109	110	110	110	232	241	251	261	285	246
HMAX	336	358	362	370	372	370	387	370	383	394	398	361
SHMAX	2523	3125	2975	2984	2787	2404	1912	1304	1239	1317	1204	1098
KM												
400										1640	1697	
390							1876		1697	1638	1688	
380					2294		1872		1696	1617	1650	
370			2536	2465	2293	2064	1853	1697	1671	1574	1582	1756
360		2753	2535	2454	2279	2054	1818	1683	1614	1507	1486	1756
350		2744	2518	2420	2244	2024	1767	1638	1523	1415	1368	1731
340	2536	2708	2475	2364	2189	1975	1700	1565	1401	1303	1201	1664
330	2528	2643	2408	2282	2109	1907	1612	1457	1255	1171	1004	1556
320	2482	2548	2315	2172	2020	1814	1512	1327	1080	1004	754	1411
310	2394	2430	2187	2045	1907	1704	1400	1184	896	814	477	1216
300	2260	2294	2046	1907	1756	1581	1269	1035	679	808	240	982
290	2087	2105	1887	1752	1604	1431	1143	854	446	389	60.0	698
280	1887	1907	1702	1588	1446	1283	982	643	262	198		417
270	1688	1692	1519	1411	1291	1155	814	446	135	71.4		170
260	1468	1468	1341	1255	1111	1004	591	251	60.0			71.4
250	1260	1260	1143	1096	960	861	335	90.5				26.3
240	1080	1050	990	932	834	726	83.8					
230	932	889	848	804	726	616						
220	804	754	735	688	625	516						
210	688	643	634	591	547	446						
200	599	557	553	508	477	378						
190	516	489	483	435	417	320						
180	446	432	423	378	356	267						
170	389	384	373	327	310	219						
160	344	340	331	286	262	182						
150	306	295	293	254	226	153						
140	266	256	259	225	194	132						
130	234	225	225	201	173	122						
120	211	206	205	185	158	114						
110	143	161	127	97.2	40.2	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 5 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A	A	A	A
HMIN	243	228	204	213	224	208	267		109	109	110	109
HMAX	333	320	319	347	342	358	381		290	322	319	348
SHMAX	832	732	648	549	393	349	314		1171	1951	2027	2643
KM												
390							417					
380							417					
370							413					
360						389	403					
350				625	508	387	387					2327
340	1528			623	508	381	366					2320
330	1526			614	503	370	338			2032		2288
320	1490	1265	896	598	490	354	298			2031	2096	2232
310	1410	1249	890	573	470	335	251			2012	2085	2151
300	1283	1203	871	543	446	310	198			1964	2048	2052
290	1119	1124	838	503	409	279	135		1528	1888	1986	1921
280	875	1016	798	457	366	244	77.6		1513	1795	1895	1769
270	608	875	732	406	310	207	19.3		1470	1654	1771	1604
260	262	679	643	342	251	168			1398	1501	1626	1429
250	65.7	389	551	278	179	130			1301	1321	1465	1240
240		143	417	212	104	93.9			1175	1143	1281	1065
230		26.3	240	143	46.5	64.6			1019	939	1050	917
220			112	71.4		43.9			834	754	861	794
210			40.2			8.4			608	608	691	688
200									403	498	540	591
190									278	410	437	508
180									204	341	355	435
170									157	286	295	373
160									127	236	245	323
150									115	196	198	282
140									109	170	181	244
130									104	156	172	219
120									100	148	165	205
110									49.6	71.4	83.8	83.8

ELECTRON DENSITY

PUERTO RICO 60 W 5 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A		B		A			
HMIN	103	108	108	110	110	110	241	240	252	258	255	285
HMAX	345	349	362	365	366	366	374	373	383	376	376	374
SHMAX	2629	2804	2966	2721	2676	2342	1652	1488	1303	1186	1179	947
KM												
390									1697			
380							1938	1756	1696	1727	1583	1640
370			2643	2536	2362	2064	1936	1755	1675	1721	1579	1637
360			2643	2532	2357	2060	1913	1736	1629	1684	1551	1598
350	2500	2643	2621	2500	2329	2037	1866	1693	1556	1614	1498	1516
340	2496	2629	2568	2436	2277	1994	1794	1626	1456	1507	1418	1386
330	2458	2581	2484	2341	2199	1930	1690	1534	1327	1371	1316	1221
320	2382	2497	2362	2205	2090	1836	1578	1420	1175	1201	1184	1004
310	2264	2370	2210	2048	1962	1727	1429	1283	1004	982	1027	754
300	2105	2210	2048	1866	1816	1606	1257	1143	794	754	834	417
290	1925	2032	1846	1669	1652	1462	1096	975	540	492	608	127
280	1727	1826	1646	1446	1483	1312	875	794	310	240	389	
270	1534	1601	1446	1260	1308	1171	643	608	143	97.2	179	
260	1321	1383	1257	1035	1157	1019	417	403	60.0	26.3	49.6	
250	1143	1191	1065	889	990	875	229	209				
240	990	1019	917	754	834	742		12.4				
230	861	861	794	652	707	619						
220	745	742	698	565	599	524						
210	652	643	615	495	508	439						
200	580	560	540	437	425	368						
190	519	495	477	389	356	304						
180	467	437	423	340	300	254						
170	417	389	373	295	259	211						
160	373	348	331	249	219	176						
150	335	310	295	207	190	148						
140	296	277	262	187	169	129						
130	262	248	228	175	156	120						
120	235	227	208	167	146	112						
110	212	161	143	97.2	12.4	40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 6 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	259	238	208	199	218	199	311	116	109	110	109	108
HMAX	347	320	292	293	348	364	415	301	298	311	327	326
SHMAX	839	756	587	372	345	289	241	690	1262	1747	2096	2152
KM												
420							335					
410							335					
400							329					
390							319					
380							303					
370						298	286					
360						297	256					
350	1612				417	294	219					
340	1599				415	288	173					
330	1535				408	275	122				2032	2193
320	1416	1556			394	261	65.7			2064	2026	2187
310	1240	1528			374	244		814		2063	1996	2150
300	1004	1446	1143	625	350	225		814	1446	2041	1943	2080
290	716	1321	1142	624	317	203		806	1439	1981	1860	1969
280	389	1119	1117	612	281	181		785	1409	1882	1760	1831
270	127	814	1058	585	240	158		751	1355	1752	1626	1669
260	1284	417	960	540	198	134		710	1279	1574	1465	1493
250		127	820	483	156	112		643	1179	1362	1291	1308
240		26.3	625	408	112	89.6		557	1050	1119	1143	1096
230			362	310	65.7	67.6		467	903	896	975	932
220			97.2	198	12.4	51.1		371	742	704	820	781
210			21.7	77.6		34.0		294	596	557	691	655
200				12.4		3.1		224	477	454	573	549
190								175	371	382	469	465
180								138	298	320	389	408
170								114	245	267	330	362
160								97.2	202	223	282	325
150								88.8	171	187	246	286
140								77.6	150	170	214	245
130								66.9	138	158	194	216
120								54.8	128	148	180	201
110									83.8	49.6	112	143

ELECTRON DENSITY

PUERTO RICO 60 W 6 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			B	A	A	A	B					
HMIN	110	109		110	110	115	220	258	233	256	242	240
HMAX	350	347		369	371	364	375	374	386	378	380	374
SHMAX	2685	2594		2608	2369	1991	1515	1330	1436	1207	1211	1088
KM												
390									1612			
380					1907		1756	1786	1608	1583	1500	1500
370				2161	1907	1756	1753	1783	1586	1576	1490	1498
360				2152	1896	1754	1729	1756	1545	1545	1459	1475
350	2465	2396		2123	1868	1737	1681	1698	1484	1490	1406	1426
340	2450	2388		2072	1822	1700	1610	1611	1403	1408	1332	1350
330	2406	2352		1996	1754	1634	1507	1487	1303	1303	1240	1250
320	2332	2282		1907	1676	1546	1388	1341	1179	1179	1119	1127
310	2221	2172		1786	1567	1455	1255	1175	1050	1019	975	960
300	2089	2045		1654	1457	1352	1096	982	917	834	807	754
290	1925	1907		1515	1341	1228	932	754	754	608	643	540
280	1727	1735		1371	1216	1107	754	524	591	403	446	335
270	1534	1556		1221	1084	990	573	286	417	179	262	179
260	1341	1362		1050	971	865	403	60.0	229	49.6	127	83.8
250	1143	1191		917	861	754	251		97.2		54.8	47.2
240	975	1019		794	754	652	135		44.9			1.3
230	834	861		694	670	565	63.8					
220	716	742		608	591	485	3.1					
210	625	634		540	516	417						
200	547	549		477	446	351						
190	483	477		423	389	298						
180	432	417		375	335	251						
170	384	371		327	291	213						
160	343	332		286	253	185						
150	307	294		246	219	161						
140	270	256		223	191	143						
130	238	232		209	173	135						
120	215	215		195	162	119						
110	127	97.2		40.2	40.2							

ELECTRON DENSITY

PUERTO RICO 60 W 7 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												8
HMIN	247	243	226	216	204	263	269	116	110	109	110	
HMAX	350	335	315	313	391	397	357	294	299	301	328	
SHMAX	865	803	689	457	525	408	338	858	1341	1392	2118	
KM												
400					524	508						
390					524	506						
380					520	496						
370					510	479						
360					494	454	573					
350	1420				471	421	570					
340	1404	1393			443	380	552					
330	1355	1389			409	335	516				1969	
320	1274	1355	1143	698	369	280	471				1962	
310	1167	1287	1140	697	331	224	410			1816	1934	
300	990	1186	1116	687	286	173	335	1191	1556	1815	1878	
290	774	1050	1070	663	245	122	251	1189	1546	1797	1807	
280	540	834	1004	627	207	75.6	143	1165	1512	1748	1711	
270	286	573	889	579	172	42.5	40.2	1116	1454	1669	1601	
260	112	262	735	508	138			1041	1368	1556	1474	
250	40.2	71.4	557	427	112			932	1263	1416	1327	
240			310	323	88.3			794	1127	1257	1175	
230			71.4	161	67.6			625	960	1050	1019	
220				44.9	49.6			462	774	861	848	
210					26.3			335	608	691	691	
200								240	467	557	573	
190								179	362	446	489	
180								138	292	368	425	
170								112	240	305	367	
160								97.2	202	262	320	
150								88.3	175	222	278	
140								78.7	155	197	243	
130								68.6	141	178	216	
120								56.5	127	166	200	
110									12.4	112	40.2	

ELECTRON DENSITY

PUERTO RICO 60 W 7 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							8					
HMIN	110	110	109	110	110	110	240	259	265	277	277	276
HMAX	339	364	332	365	377	371	376	388	403	399	396	392
SHMAX	2639	2785	1975	2433	2602	2230	1452	1421	1341	1194	1165	1218
KM												
410									1612			
400									1611	1583	1612	1640
390								1669	1593	1573	1607	1639
380					2032	1876	1756	1662	1554	1538	1577	1623
370		2396		2064	2028	1876	1751	1635	1493	1478	1520	1584
360		2394		2061	2008	1865	1720	1587	1408	1389	1437	1522
350		2368		2036	1972	1835	1659	1514	1308	1278	1341	1429
340	2465	2315	2161	1988	1919	1786	1565	1425	1184	1143	1191	1228
330	2453	2234	2141	1915	1842	1708	1457	1316	1050	982	1004	1167
320	2412	2122	2042	1808	1756	1617	1327	1184	875	794	794	1004
310	2340	1985	1907	1692	1657	1512	1175	1035	679	573	540	754
300	2233	1820	1769	1556	1542	1400	1019	861	492	362	310	477
290	2103	1652	1612	1416	1407	1285	848	679	310	161	143	219
280	1942	1483	1446	1278	1278	1175	679	477	152	40.2	40.2	49.6
270	1766	1308	1274	1155	1131	1061	508	286	49.6			
260	1574	1143	1111	1027	1004	932	375	49.6				
250	1362	990	960	903	886	814	240					
240	1167	865	844	794	774	707	12.4					
230	975	764	739	698	687	616						
220	834	679	657	616	608	532						
210	707	614	587	547	532	454						
200	608	557	524	487	462	375						
190	527	503	472	432	396	304						
180	465	446	427	380	341	251						
170	408	395	385	335	298	207						
160	362	344	347	291	259	174						
150	328	303	310	255	225	148						
140	293	271	276	222	198	130						
130	260	243	246	198	178	122						
120	240	224	223	186	166	115						
110	12.4	40.2	143	40.2	49.6	40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 8 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A		8
HMIN	249	237	208	202	269	272	295	116	111	111	111	
HMAX	332	349	351	350	408	394	402	299	306	318	326	
SHMAX	743	909	816	599	548	428	507	922	1495	1967	2071	
KM												
410					625		716					
400					623	573	716					
390					613	573	708					
380					596	563	687					
370					570	543	656					
360			982		540	511	613					
350		1265	982	698	499	472	553					
340	1473	1257	973	693	451	422	477					
330	1472	1229	947	677	395	367	380				2096	
320	1437	1181	912	652	329	304	286			2064	2090	
310	1352	1111	857	618	268	246	161		1697	2055	2059	
300	1208	1027	794	573	198	173	60.0	1215	1693	2020	1990	
290	1027	903	716	519	127	107		1205	1664	1957	1907	
280	754	754	631	459	71.4	54.8		1170	1609	1863	1786	
270	417	573	540	396	12.4			1113	1526	1742	1631	
260	161	362	437	335				1027	1420	1598	1462	
250	12.4	143	335	268				907	1283	1425	1274	
240		40.2	229	198				781	1127	1216	1111	
230			127	135				643	960	1019	932	
220			60.0	77.6				492	774	834	768	
210			12.4	43.3				362	608	679	643	
200								251	467	551	540	
190								179	362	454	462	
180								131	286	362	395	
170								105	227	298	340	
160								89.9	190	248	291	
150								81.5	163	210	240	
140								76.9	145	182	201	
130								72.3	135	168	189	
120								54.8	121	149	179	

ELECTRON DENSITY

PUERTO RICO 60 W 8 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	8						B					F
HMIN	112	112	110	109	110	110	229	250	278	285	249	276
HMAX	350	359	366	373	375	383	380	385	410	420	370	412
SHMAX	2659	2696	2708	2591	2545	2374	1734	1414	1547	1858	1554	2086
KM												
420										2396		2396
410									2000	2378		2395
400									1985	2323		2378
390						1907		1669	1941	2233		2334
380				2000	2000	1906	1938	1666	1866	2103		2266
370			2227	1999	1998	1893	1925	1645	1760	1942	2161	2171
360		2327	2222	1986	1981	1862	1888	1604	1626	1739	2142	2055
350	2327	2317	2195	1955	1946	1815	1826	1539	1465	1512	2086	1907
340	2315	2281	2136	1907	1892	1747	1737	1455	1260	1240	1994	1727
330	2276	2219	2056	1831	1821	1669	1631	1352	1027	896	1861	1501
320	2212	2128	1952	1747	1737	1566	1493	1224	754	573	1688	1208
310	2118	2018	1834	1648	1635	1457	1341	1065	446	310	1490	875
300	2004	1876	1698	1543	1519	1341	1162	896	219	127	1240	508
290	1861	1719	1542	1420	1400	1218	990	716	97.2	44.9	917	240
280	1702	1556	1401	1291	1269	1096	814	508	21.7		608	49.6
270	1540	1376	1255	1167	1127	975	643	310			310	
260	1376	1208	1127	1038	990	854	477	152			97.2	
250	1224	1050	993	928	865	745	310	12.4			12.4	
240	1065	907	886	824	764	652	127					
230	917	784	794	735	679	567	12.4					
220	794	694	716	652	608	500						
210	688	615	649	573	540	425						
200	599	553	580	508	482	356						
190	524	498	514	446	423	298						
180	453	446	453	398	362	245						
170	395	395	398	354	310	205						
160	348	353	348	317	266	176						
150	305	314	306	282	231	152						
140	262	267	273	250	204	134						
130	234	235	243	221	179	122						
120	205	205	219	202	165	115						
110			40.2	127	49.6	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 9 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		F	F	F	F						A	A
HMIN	253	225	218	209	295	302	271	111	106	109	106	109
HMAX	373	344	345	360	464	429	401	325	316	333	332	347
SHMAX	1697	1376	1250	823	830	813	835	1561	1883	2407	2573	2750
KM												
470					917							
460					916							
450					906							
440					884							
430					850	1073						
420					804	1065						
410					748	1041	1096					
400					685	999	1096					
390					615	939	1085					
380	2260				532	865	1056					
370	2258				446	768	1010					
360	2230			1050	348	661	946					
350	2167	2032	1473	1040	240	540	865					2430
340	2068	2028	1471	1012	167	403	764			2327	2536	2424
330	1934	1989	1454	966	107	240	652	1727		2326	2535	2392
320	1766	1907	1419	900	71.4	119	529	1724	1876	2304	2513	2333
310	1556	1771	1368	818	48.0	54.8	375	1704	1872	2255	2459	2242
300	1316	1612	1299	726	20.3		229	1663	1850	2179	2373	2135
290	1004	1404	1211	616			119	1602	1808	2075	2249	2000
280	643	1167	1115	508			60.0	1519	1742	1948	2096	1846
270	335	896	990	389				1423	1669	1786	1925	1698
260	127	608	848	286				1298	1566	1612	1727	1524
250		362	679	198				1127	1431	1411	1534	1359
240		161	446	122				917	1274	1208	1321	1182
230		49.6	179	75.6				698	1065	1027	1096	1019
220			26.3	44.9				492	875	861	903	875
210				3.1				335	735	716	742	742
200								240	608	596	608	619
190								179	487	498	500	519
180								143	389	389	410	439
170								118	302	310	335	368
160								102	236	249	280	310
150								89.4	195	211	232	259
140								81.2	166	179	198	228
130								76.1	145	161	178	212
120								65.7	134	150	168	202
110									112	112	143	127

ELECTRON DENSITY

PUERTO RICO 60 W 9 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	B			A	A	A		S			
HMIN	111		109	110	108	110		218	268	268	264	257
HMAX	358		358	352	361	368		420	411	402	381	384
SHMAX	2901		2752	2683	2698	2365		1651	1206	1316	1158	1213
KM												
420								1528	1556			
410								1521	1555	1669		
400								1500	1540	1668		
390								1466	1498	1652	1640	1640
380								1417	1429	1612	1640	1638
370					2396	2000		1355	1335	1547	1622	1614
360	2500		2536	2536	2396	1995		1274	1212	1463	1575	1563
350	2492		2524	2535	2381	1972		1187	1065	1353	1492	1485
340	2456		2477	2509	2342	1933		1084	917	1208	1388	1376
330	2394		2385	2447	2279	1871		982	735	1050	1255	1253
320	2304		2264	2331	2192	1800		861	573	834	1096	1096
310	2185		2105	2201	2079	1708		745	389	608	896	875
300	2032		1925	2048	1938	1601		631	240	389	643	661
290	1872		1727	1866	1786	1483		508	127	179	389	417
280	1702		1519	1669	1604	1354		398	63.8	83.8	179	219
270	1519		1324	1483	1411	1208		294	12.4	21.7	60.0	83.8
260	1341		1159	1291	1216	1050		212				30.9
250	1171		1004	1111	1019	903		143				
240	1035		865	946	861	742		92.8				
230	896		764	820	729	619		53.1				
220	784		672	716	608	508		12.4				
210	688		608	616	524	417						
200	608		551	534	453	348						
190	540		498	462	395	295						
180	471		451	400	341	251						
170	410		403	348	295	215						
160	351		358	303	255	185						
150	300		318	269	219	161						
140	253		282	240	190	143						
130	232		248	215	175	134						
120	212		227	198	166	122						
110			143	12.4	112	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 10 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A		A				S	B			A	
HMIN	264	261	249	192	203	302	342	115	106	108	106	108
HMAX	394	367	364	290	459	456	509	298	298	325	360	373
SHMAX	1094	807	1003	569	548	265	289	759	1393	1F17	2140	2523
KM												
510							262					
500							262					
490							259					
480							254					
470							247					
460					298	298	238					
450					297	297	227					
440					296	292	216					
430					295	283	200					
420					292	268	183					
410					289	250	164					
400	1420				284	229	143					
390	1418				280	207	123					
380	1399				274	182	99.6					1876
370	1358	1240	1310		267	156	79.7					1875
360	1296	1234	1314		260	130	60.0				1640	1864
350	1214	1202	1299		251	104	35.5				1633	1839
340	1119	1143	1267		243	81.8					1614	1800
330	990	1059	1216		233	61.9				1756	1581	1743
320	834	946	1155		223	46.9				1753	1531	1681
310	643	807	1068		212	24.7				1732	1471	1599
300	417	643	946		201			1119	1583	1688	1398	1506
290	240	446	781	875	189			1111	1576	1623	1314	1404
280	112	240	608	866	176			1077	1545	1536	1222	1301
270	49.6	97.2	362	841	163			1017	1490	1433	1131	1184
260			143	802	150			928	1408	1298	1016	1065
250			12.4	739	137			807	1303	1143	909	950
240				652	122			643	1179	990	814	834
230				551	103			446	1035	848	724	726
220				432	78.9			298	875	729	643	643
210				286	49.6			198	704	616	573	560
200				83.8				139	551	519	514	495
190								106	417	439	459	442
180								85.5	318	373	400	389
170								76.8	240	315	346	344
160								70.6	191	267	295	306
150								67.7	161	231	251	266
140								64.9	140	204	217	238
130								62.0	124	179	197	219
120								54.8	115	166	187	207
110									97.2	127	165	179

ELECTRON DENSITY

PUERTO RICO 60 W 10 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A		B					
HMIN	109	110	110	110	108	110	213	249	233	211	219	288
HMAX	409	371	377	381	390	428	392	364	362	353	381	425
SHMAX	3206	3551	3481	2803	2124	2338	1582	1243	1356	1001	890	797
KM												
430						1500						960
420						1498						959
410	2260					1487						946
400	2253					1468	1846					920
390	2227			2128	1341	1441	1845				982	883
380	2183	3057	2790	2128	1338	1405	1826				982	828
370	2115	3056	2785	2118	1327	1361	1780	1786	1669		974	762
360	2039	3039	2758	2091	1310	1306	1706	1783	1668	1215	952	679
350	1938	2991	2709	2048	1286	1246	1601	1752	1653	1715	917	591
340	1822	2914	2639	1983	1254	1178	1474	1686	1618	1201	869	492
330	1695	2803	2546	1914	1214	1104	1324	1578	1561	1169	807	389
320	1568	2668	2430	1816	1169	1019	1159	1459	1483	1120	739	262
310	1446	2501	2294	1704	1119	934	960	1291	1389	1050	661	161
300	1316	2313	2142	1581	1061	850	754	1096	1278	969	582	83.8
290	1175	2096	1948	1446	997	770	591	875	1119	865	492	21.7
280	1050	1858	1766	1303	929	694	446	608	896	754	408	
270	952	1612	1556	1179	869	629	318	335	679	631	318	
260	867	1383	1341	1050	811	568	226	112	446	508	248	
250	787	1175	1143	928	754	513	155	12.4	219	362	173	
240	723	990	975	824	702	468	102		60.0	229	107	
230	669	834	834	726	653	426	65.7			119	56.5	
220	618	704	726	650	603	389	40.2			53.1	5.5	
210	568	608	631	580	551	355						
200	517	534	540	514	495	323						
190	467	472	469	446	432	289						
180	417	422	400	378	362	255						
170	367	375	346	323	298	215						
160	323	320	292	274	249	179						
150	286	279	253	234	209	153						
140	244	251	228	209	177	132						
130	221	235	214	193	159	122						
120	208	223	204	182	150	115						
110	127	40.2	49.6	49.6	127	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 11 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	B
HMIN	279	252	226	279	247	248	288	118	109	116	109	
HMAX	375	354	381	409	385	399	390	310	307	318	336	
SHMAX	624	585	602	546	543	522	443	1029	1605	1940	2495	
KM												
410				661								
400				657		557						
390			625	645	643	554	625					
380	1027		625	624	642	546	620					
370	1024		621	592	633	531	605					
360	999	917	610	553	617	510	580					
350	946	915	592	508	591	485	544					
340	875	896	567	446	559	453	498				2193	
330	774	854	537	382	517	413	432				2190	
320	643	794	499	310	465	371	362			2161	2168	
310	492	716	455	233	403	323	270	1265	1816	2149	2125	
300	323	619	412	152	335	268	161	1255	1809	2103	2062	
290	143	498	362	77.6	270	214	49.6	1225	1777	2020	1974	
280	12.4	362	310	12.4	192	161		1175	1717	1907	1870	
270		198	251		117	102		1109	1627	1752	1747	
260		71.4	198		63.8	56.5		1013	1515	1556	1604	
250			138		19.3	12.4		889	1371	1362	1460	
240			71.4					735	1216	1162	1308	
230			26.3					557	1065	960	1157	
220								403	875	774	990	
210								294	661	631	814	
200								214	477	508	661	
190								165	353	408	519	
180								132	262	329	432	
170								110	212	272	371	
160								95.0	176	227	320	
150								83.8	152	191	268	
140								79.7	134	165	226	
130								75.6	124	153	198	
120								71.4	117	144	186	
110									60.0		97.2	

ELECTRON DENSITY

PUERTO RICO 60 W 11 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	B	B	B				B				S	
HMIN		112	113	110	108	109	109	240	255	281	280	258
HMAX		355	374	375	362	365	378	386	423	405	399	366
SHMAX		2865	3036	3225	2704	2374	2183	1559	1388	981	924	900
KM												
430									1367			
420									1367			
410									1357	1290		
400									1334	1288	1290	
390								1612	1299	1267	1281	
380			2607	2753			1938	1609	1251	1226	1249	
370			2605	2749	2465	2096	1932	1592	1188	1165	1195	1316
360		2643	2579	2721	2465	2093	1911	1561	1119	1086	1119	1312
350		2639	2524	2665	2444	2072	1873	1515	1032	982	1016	1287
340		2604	2440	2581	2393	2029	1819	1453	939	861	889	1240
330		2535	2318	2470	2313	1964	1747	1379	824	716	735	1171
320		2430	2187	2335	2187	1876	1669	1291	716	557	557	1084
310		2277	2014	2161	2046	1773	1556	1179	596	362	389	946
300		2105	1826	1978	1889	1640	1431	1061	462	219	209	774
290		1907	1631	1762	1719	1493	1283	917	323	77.6	83.8	573
280		1708	1446	1537	1534	1341	1155	754	198			323
270		1490	1257	1341	1341	1182	1004	573	104			135
260		1301	1084	1143	1143	1019	848	362	44.9			26.3
250		1127	946	975	990	861	679	161				
240		975	824	834	834	729	540	12.4				
230		844	732	716	707	616	408					
220		745	661	625	608	524	310					
210		665	596	553	532	454	229					
200		591	540	499	465	383	175					
190		521	477	455	400	330	134					
180		459	417	412	351	281	108					
170		400	356	369	302	237	89.8					
160		346	305	327	262	202	79.2					
150		303	259	286	226	172	71.4					
140		266	226	251	198	152	68.2					
130		234	203	221	178	138	64.9					
120		198	173	204	165	128	61.6					
110				112	112	60.0	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 12 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	240	256	247	214	228	217	255	117	118	117	110	110
HMAX	359	383	353	365	367	368	369	311	323	329	342	356
SHMAX	706	682	543	601	495	462	416	850	1449	2030	2504	2962
KM												
390		875										
380		874										
370		864		643	573	508	508					
360	960	840	854	642	572	506	505					2607
350	954	802	853	635	563	498	497				2294	2602
340	933	754	837	620	547	484	482				2293	2572
330	896	687	798	596	523	463	460		1420	2000	2275	2515
320	846	608	742	567	494	438	433	917	1419	1991	2231	2430
310	778	519	670	532	455	405	400	917	1406	1960	2161	2316
300	688	417	573	492	408	366	362	910	1377	1907	2061	2175
290	573	310	462	446	356	323	310	892	1329	1826	1934	2014
280	457	198	335	400	298	274	251	861	1270	1727	1799	1826
270	310	90.5	198	346	240	227	179	824	1191	1606	1636	1623
260	161	40.2	97.2	286	186	183	83.8	768	1096	1462	1465	1425
250	65.7		30.9	212	119	135		694	982	1291	1281	1221
240	3.1			135	60.0	92.8		616	875	1096	1119	1050
230				68.6	12.4	54.8		524	754	903	946	889
220				40.2		18.0		427	643	729	807	768
210								344	519	585	679	661
200								262	425	477	573	580
190								192	335	403	485	508
180								143	268	335	410	446
170								114	215	286	351	394
160								96.4	179	244	300	344
150								88.0	156	207	258	292
140								79.7	141	183	222	248
130								71.4	132	169	196	217
120								52.2	97.2	138	183	203
110											49.6	40.2

ELECTRON DENSITY

PUERTO RICO 60 W 12 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							B					
HMIN	110	110	108	109	107	107	120	259	245	271	269	259
HMAX	361	375	365	371	383	384	381	366	407	391	379	385
SHMAX	3104	3228	3109	2778	2831	2345	2145	1283	1452	1117	989	1072
KM												
410									1528			
400									1524	1528		
390					2128	1846	1938		1504	1528		1420
380		2607		2327	2127	1844	1937		1469	1512	1420	1417
370	2753	2604	2571	2327	2115	1831	1927	1816	1417	1471	1409	1396
360	2753	2578	2568	2312	2086	1803	1898	1809	1349	1404	1372	1353
350	2734	2526	2542	2271	2042	1760	1851	1772	1265	1308	1309	1289
340	2684	2449	2490	2204	1982	1703	1786	1700	1164	1191	1218	1205
330	2602	2339	2409	2102	1907	1625	1696	1594	1050	1050	1107	1096
320	2482	2214	2304	1982	1814	1536	1597	1471	917	875	960	960
310	2339	2064	2174	1846	1704	1436	1483	1353	781	661	794	774
300	2161	1907	2032	1698	1581	1330	1341	1096	643	446	608	573
290	1969	1727	1855	1537	1459	1216	1191	875	477	240	389	362
280	1762	1556	1685	1371	1329	1096	1035	625	335	83.8	143	179
270	1556	1376	1519	1221	1191	975	875	335	189		12.4	71.4
260	1341	1212	1341	1065	1050	865	716	49.6	97.2			12.4
250	1159	1080	1171	932	932	754	585		43.3			
240	1004	960	1019	807	820	661	467					
230	861	844	889	709	716	565	368					
220	735	754	774	629	625	485	292					
210	643	670	679	568	547	410	235					
200	567	594	594	513	477	342	191					
190	502	524	527	462	417	281	155					
180	446	462	467	412	356	235	129					
170	398	406	417	366	310	191	108					
160	358	357	375	327	266	158	94.1					
150	318	314	339	289	233	132	83.8					
140	268	276	307	253	204	117	79.1					
130	237	237	270	224	179	108	74.3					
120	219	220	235	206	168	103	12.4					
110	40.2	12.4	179	83.8	127	97.2						

ELECTRON DENSITY

PUERTO RICO 60 W 13 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S				
HMIN	246	245	234	232	259	281	306	113	110	109	108	110
HMAX	349	336	348	361	408	417	430	305	325	323	338	354
SHMAX	836	632	626	552	540	493	559	845	1731	2029	2367	2661
KM												
430							643					
420						573	639					
410					608	571	629					
400					605	562	612					
390					594	545	589					
380					576	519	562					
370				679	546	487	522					
360				679	514	446	471					2327
350	1393		875	673	472	403	410					2325
340	1380	1119	870	657	427	356	342				2227	2302
330	1332	1113	852	630	378	304	262		1697	2128	2218	2253
320	1250	1079	818	596	323	246	170		1695	2127	2183	2179
310	1143	1012	771	551	268	186	60.0	1027	1675	2102	2121	2075
300	990	917	707	495	209	119		1024	1636	2046	2032	1948
290	794	794	625	432	149	63.8		1004	1577	1955	1907	1801
280	524	625	519	368	92.8			955	1497	1839	1769	1636
270	262	417	389	294	53.1			899	1404	1685	1604	1465
260	112	209	262	219	6.8			834	1283	1519	1429	1291
250	40.2	60.0	143	135				754	1164	1341	1240	1111
240			49.6	60.0				670	1019	1143	1080	971
230								582	875	939	917	844
220								477	716	768	781	729
210								362	585	619	667	634
200								251	469	508	565	557
190								152	380	417	485	492
180								93.9	304	351	412	437
170								76.6	246	300	348	389
160								69.7	203	259	295	348
150								66.4	167	222	255	306
140								63.0	141	192	222	266
130								59.2	124	163	200	228
120								51.2	115	150	181	201
110									12.4	97.2	143	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 13 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A					8					
HMIN	110	110	109	110	110	110	248	240	255	245	251	279
HMAX	356	367	372	372	384	372	372	378	416	392	372	393
SHMAX	2866	3028	2919	2569	2550	2299	1445	1473	1466	1244	885	875
KM												
420									1528			
410									1525			
400									1509	1473		1290
390					2032				1477	1473		1289
380			2327	2128	2030	1969	1846	1612	1431	1460	1265	1267
370		2571	2327	2128	2014	1968	1845	1606	1370	1429	1264	1212
360	2716	2565	2312	2112	1979	1954	1825	1584	1291	1380	1245	1143
350	2709	2532	2277	2073	1926	1921	1776	1545	1201	1308	1199	1038
340	2669	2471	2221	2005	1850	1857	1698	1488	1096	1221	1127	917
330	2591	2378	2141	1916	1764	1786	1581	1414	960	1119	1027	754
320	2469	2267	2042	1808	1656	1688	1446	1330	814	982	917	596
310	2324	2128	1919	1682	1528	1586	1291	1216	661	820	781	432
300	2139	1960	1786	1556	1394	1460	1119	1096	492	643	643	240
290	1928	1786	1640	1401	1255	1329	932	946	335	477	492	97.2
280	1692	1593	1493	1255	1143	1204	716	794	209	310	310	12.4
270	1446	1404	1327	1127	1004	1065	477	608	112	161	152	
260	1240	1224	1162	990	875	932	262	403	44.9	75.6	65.7	
250	1050	1080	1016	861	764	807	60.0	198		33.2		
240	889	939	896	754	670	691		12.4				
230	754	824	794	665	582	585						
220	661	726	707	594	514	492						
210	585	636	629	535	457	410						
200	524	557	560	482	403	342						
190	477	489	495	434	356	291						
180	434	429	429	389	310	245						
170	393	378	373	344	270	209						
160	348	335	320	302	234	177						
150	306	296	276	262	198	154						
140	266	262	237	226	173	135						
130	233	235	215	197	157	123						
120	211	219	202	183	148	115						
110	12.4	40.2	127	49.6	40.2	49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 14 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A		A	A
HMIN	269	272	247	228	244	275	289	109	111	109	109	106
HMAX	376	389	370	349	376	395	405	323	319	339	343	344
SHMAX	830	787	805	699	574	519	621	1229	1659	2361	2317	2696
KM												
410							774					
400						698	773					
390		1119				696	762					
380	1265	1111			735	684	741					
370	1260	1082	1073		733	660	708					
360	1230	1033	1064		720	621	665					
350	1173	960	1038	939	695	573	614				2327	2680
340	1096	865	993	932	661	514	553			2128	2326	2676
330	982	754	932	911	613	446	483	1191		2120	2296	2642
320	848	625	854	875	553	368	398	1190	1727	2090	2229	2569
310	679	477	754	822	483	286	298	1181	1717	2040	2118	2457
300	492	310	643	754	403	198	179	1159	1683	1969	1969	2309
290	286	143	508	670	318	104	40.2	1126	1619	1874	1803	2118
280	122	60.0	362	565	229	46.5		1080	1546	1760	1612	1907
270	12.4		240	457	143			1024	1446	1626	1411	1669
260			112	323	75.6			953	1316	1478	1216	1446
250			40.2	189	40.2			875	1184	1324	1027	1208
240				83.8				794	1050	1143	861	990
230				26.3				698	917	960	742	834
220								599	768	794	643	704
210								487	625	667	567	599
200								371	498	551	502	516
190								251	389	469	446	453
180								167	274	403	394	398
170								124	211	335	341	353
160								103	170	286	286	310
150								88.7	143	244	237	270
140								81.3	119	207	198	236
130								77.0	108	179	176	217
120								72.7	101	167	166	207
110								40.2		83.8	60.0	186

ELECTRON DENSITY

PUERTO RICO 60 W 14 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		A	A	A	A	A					
HMIN	109	106		110	111		249	239	272	274	268	314
HMAX	351	363		375	363		385	396	423	404	394	453
SHMAX	2859	2945		2821	2541		1789	1611	1440	1316	1064	1237
KM												
460												1500
450												1500
440												1484
430									1612			1447
420									1611			1391
410									1596	1727		1315
400								1697	1562	1724	1446	1218
390							1938	1694	1510	1700	1444	1107
380				2327			1935	1675	1438	1647	1422	960
370		2430		2324	2193		1915	1637	1350	1567	1374	794
360	2607	2429		2300	2192		1875	1582	1240	1459	1299	608
350	2607	2408		2251	2174		1815	1505	1111	1324	1204	417
340	2590	2360		2178	2131		1732	1418	960	1159	1080	240
330	2544	2283		2075	2065		1635	1316	781	982	917	119
320	2469	2181		1957	1969		1515	1184	608	754	754	46.5
310	2362	2057		1816	1858		1371	1038	446	540	573	
300	2234	1907		1669	1727		1208	889	286	298	389	
290	2069	1752		1509	1572		1050	735	152	135	219	
280	1872	1588		1341	1431		854	557	65.7	49.6	90.5	
270	1688	1431		1198	1274		608	389			21.7	
260	1490	1283		1050	1111		335	219				
250	1281	1155		917	960		60.0	90.5				
240	1050	1019		814	834			12.4				
230	875	907		716	726							
220	729	794		636	629							
210	619	698		560	549							
200	534	615		495	477							
190	471	540		441	412							
180	417	477		389	356							
170	366	417		340	306							
160	320	367		300	269							
150	278	327		262	237							
140	240	289		229	204							
130	217	257		198	183							
120	206	232		186	168							
110	143	189		40.2								

ELECTRON DENSITY

PUERTO RICO 60 W 15 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S				B
HMIN	269	227	218	213	235	237	299	113	110	107	110	109
HMAX	376	334	315	352	384	418	415	335	322	326	338	351
SHMAX	1075	1030	697	763	550	597	567	1312	1744	2107	2270	2564
KM												
420						590	735					
410						588	734					
400						580	723					
390					643	566	702					
380	1669				642	545	671					
370	1662				633	517	628					
360	1622			875	615	486	578					2327
350	1545			875	586	446	514					2327
340	1433	1640		868	549	405	432	1316			2128	2311
330	1291	1637		853	503	362	335	1314	1846	2128	2120	2267
320	1096	1602	1215	828	451	310	229	1301	1845	2123	2085	2197
310	875	1528	1211	794	395	262	104	1275	1828	2094	2023	2096
300	608	1433	1175	754	335	219	12.4	1235	1786	2039	1933	1969
290	348	1281	1104	698	280	170		1187	1720	1957	1622	1816
280	112	1096	993	625	219	127		1133	1627	1853	1683	1650
270	12.4	834	861	540	167	91.9		1041	1515	1712	1524	1465
260		573	698	437	102	64.6		928	1371	1537	1359	1291
250		310	508	310	60.0	44.9		794	1201	1341	1182	1127
240		112	286	179	29.1	12.4		655	1027	1143	1019	975
230		30.9	112	97.2				524	854	946	875	820
220			26.3	43.3				408	698	774	764	707
210								318	573	631	661	608
200								240	446	516	573	527
190								179	353	432	485	459
180								131	270	362	412	400
170								102	211	310	351	346
160								86.5	172	262	298	298
150								72.8	140	226	251	246
140								67.3	115	196	219	209
130								62.8	107	169	189	192
120								54.8	100	150	169	181
110									40.2	112	60.0	143

ELECTRON DENSITY

PUERTO RICO 60 W 15 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	B	B	A	A	A	A	B					
HMIN	109	107	112	112	110	112		230	257	281	278	276
HMAX	353	352	358	374	360	366		378	417	398	399	404
SHMAX	2765	2626	2548	2637	2235	2148		1533	1353	1092	1177	1233
KM												
420									1528			
410									1523			1583
400									1500	1583	1583	1582
390									1457	1573	1573	1561
380				2096				1583	1386	1531	1538	1519
370				2094		1969		1578	1304	1456	1478	1454
360	2536	2294	2227	2077	1938	1964		1558	1208	1352	1389	1368
350	2534	2293	2218	2042	1927	1936		1523	1084	1208	1278	1263
340	2511	2274	2185	1988	1895	1874		1471	960	1050	1143	1127
330	2460	2227	2126	1915	1843	1794		1394	807	854	960	960
320	2379	2150	2042	1816	1766	1698		1304	655	643	754	735
310	2267	2042	1929	1704	1669	1570		1211	508	446	540	508
300	2128	1919	1799	1581	1556	1446		1107	362	240	310	262
290	1960	1771	1640	1433	1416	1298		982	240	83.8	127	119
280	1766	1620	1483	1298	1278	1175		848	143		26.3	44.9
270	1574	1474	1324	1157	1143	1050		716	71.4			
260	1362	1312	1159	1019	1004	889		557	19.3			
250	1127	1159	1004	896	875	768		389				
240	960	1016	865	784	764	652		198				
230	807	896	754	694	670	557		12.4				
220	688	784	670	625	594	469						
210	599	679	594	562	527	396						
200	527	591	534	513	459	335						
190	465	508	472	462	395	281						
180	408	439	417	406	330	237						
170	357	380	366	351	286	202						
160	310	335	318	300	250	170						
150	262	291	278	259	219	147						
140	227	249	237	222	189	125						
130	211	217	210	194	161	119						
120	200	204	184	179	147	113						
110	71.4	170			12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 16 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	285	241	212	211	206	258	305	114	118	109	115	111
HMAX	385	342	314	351	377	399	427	322	306	315	336	351
SHMAX	948	861	706	653	558	446	458	1024	1501	1888	2252	2549
KM												
430							557					
420							555					
410							547					
400						508	531					
390	1500					505	512					
380	1496				573	497	483					
370	1463				572	482	446					
360	1390			754	564	459	398					2193
350	1296	1393		754	550	432	342					2193
340	1159	1393		749	528	400	280				2096	2179
330	990	1370		734	502	362	205	1096			2091	2141
320	794	1310	1096	711	469	315	127	1095		2000	2064	2080
310	540	1229	1094	682	430	262	46.5	1085	1938	1997	2012	1990
300	286	1111	1071	643	385	214		1060	1930	1969	1935	1880
290	83.8	946	1017	585	341	155		1018	1874	1914	1830	1747
280		754	943	524	294	102		966	1794	1829	1698	1612
270		524	848	446	246	60.0		892	1669	1721	1556	1462
260		286	735	362	198	12.4		804	1483	1584	1416	1312
250		83.8	608	286	152			707	1265	1411	1257	1159
240			477	198	107			608	1065	1226	1111	1016
230			274	112	68.6			498	854	1050	960	886
220			97.2	49.6	47.7			398	643	861	807	781
210					16.4			316	508	691	679	687
200								246	389	551	573	599
190								194	302	446	477	516
180								154	240	353	403	441
170								123	195	286	346	383
160								103	161	237	291	330
150								89.4	141	198	249	286
140								81.1	125	172	216	244
130								75.7	117	156	193	216
120								63.8	97.2	148	167	201
110										97.2		

ELECTRON DENSITY

PUERTO RICO 60 W 16 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							B					
HMIN	109	116	109	109	108	108	230	240	248	272	266	258
HMAX	355	356	356	364	373	351	379	393	415	394	367	360
SHMAX	2757	2718	2735	2749	2830	2222	1809	1584	1514	1708	1027	1106
KM												
420									1697			
410									1695			
400								1612	1673	1756		
390								1611	1629	1753		
380					2362		1938	1598	1563	1720		
370				2362	2360		1929	1568	1474	1650	1786	
360	2465	2500	2500	2359	2342	2161	1901	1513	1365	1542	1773	1816
350	2462	2494	2495	2336	2301	2160	1854	1452	1240	1394	1709	1794
340	2432	2456	2460	2285	2237	2142	1786	1374	1096	1221	1584	1729
330	2372	2372	2393	2209	2150	2093	1696	1281	939	1027	1425	1618
320	2281	2264	2294	2102	2042	2009	1589	1182	768	794	1216	1465
310	2161	2112	2161	1969	1907	1893	1460	1073	608	573	960	1265
300	2014	1954	1996	1816	1752	1756	1312	946	446	335	679	1004
290	1826	1766	1806	1652	1598	1604	1159	807	298	170	389	716
280	1631	1574	1612	1493	1429	1446	982	667	179	60.0	143	389
270	1446	1376	1425	1324	1257	1274	774	524	104		44.9	127
260	1257	1208	1240	1143	1080	1127	524	362	56.5			26.3
250	1096	1050	1050	990	932	960	262	179	12.4			
240	950	907	896	865	804	807	83.8	12.4				
230	824	804	774	754	698	679						
220	726	709	670	665	615	573						
210	643	636	594	587	540	477						
200	573	568	529	529	477	403						
190	513	508	477	472	417	335						
180	457	446	432	422	362	281						
170	408	394	389	375	314	233						
160	362	344	341	327	276	198						
150	314	310	298	289	240	169						
140	274	274	262	253	213	149						
130	240	238	228	224	185	132						
120	224	209	209	205	169	121						
110	112		127	83.8	112	112						

ELECTRON DENSITY

PUERTO RICO 60 W 17 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A			A
HMIN	251	232	215	226	237	239	288	111	110	109	108	109
HMAX	333	314	329	370	370	377	390	322	312	323	327	349
SHMAX	813	739	735	713	573	543	465	1130	1753	2132	2295	2557
KM												
390							679					
380						643	673					
370				834	716	641	654					
360				828	711	630	622					
350				812	694	610	578					2294
340	1697			783	666	582	516					2282
330	1694		1004	745	630	544	446	1265		2128	2260	2240
320	1637	1473	998	695	579	498	362	1265	2128	2127	2253	2169
310	1509	1469	977	636	521	446	262	1252	2127	2106	2221	2064
300	1316	1424	941	567	454	389	152	1222	2099	2058	2161	1934
290	1073	1327	893	487	380	323	44.9	1174	2030	1978	2069	1786
280	754	1175	818	403	302	262		1109	1920	1882	1957	1620
270	389	982	726	310	219	192		1023	1769	1756	1816	1462
260	112	716	608	219	127	119		917	1578	1604	1652	1291
250		362	477	127	65.7	60.0		794	1341	1446	1483	1155
240		97.2	310	67.6	19.3	5.5		655	1143	1274	1281	1016
230			143	26.3				519	917	1096	1073	896
220			49.6					398	698	917	854	784
210								302	540	735	691	698
200								226	417	585	551	615
190								175	335	477	465	524
180								138	268	375	400	439
170								112	219	304	346	375
160								95.0	179	254	302	320
150								83.8	154	212	258	276
140								78.7	136	184	219	237
130								73.5	124	164	185	209
120								63.8	117	150	170	189
110									60.0	83.8	143	83.8

ELECTRON DENSITY

PUERTO RICO 60 W 17 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A			A		A					
HMIN	110	110	110	110	112	110		223	238	267	275	282
HMAX	358	361	372	373	377	373		385	409	403	402	397
SHMAX	2787	2803	3074	2746	2553	2130		1664	1491	1403	1317	940
KM												
410									1612	1756	1697	
400									1604	1755	1697	1420
390								1756	1578	1735	1680	1412
380			2536	2260	2032	1786		1754	1533	1690	1638	1375
370		2571	2535	2259	2027	1785		1735	1469	1620	1572	1306
360	2465	2571	2519	2240	2007	1770		1697	1385	1523	1483	1204
350	2456	2551	2480	2197	1969	1738		1640	1285	1407	1368	1080
340	2420	2497	2419	2126	1913	1687		1564	1167	1257	1221	917
330	2355	2406	2334	2040	1834	1608		1466	1027	1096	1004	735
320	2257	2279	2227	1919	1743	1516		1353	875	896	834	540
310	2135	2128	2103	1786	1635	1415		1226	729	643	608	310
300	1996	1960	1942	1640	1519	1308		1096	573	417	362	161
290	1831	1766	1766	1493	1394	1201		939	403	219	161	60.0
280	1650	1556	1574	1341	1265	1096		774	278	90.5	49.6	
270	1465	1362	1383	1198	1111	982		591	179	30.9		
260	1281	1175	1182	1065	975	865		417	102			
250	1080	1004	1019	932	848	754		240	56.5			
240	932	861	875	814	742	652		119	12.4			
230	794	745	745	716	643	565		53.1				
220	698	657	652	643	565	485						
210	615	580	585	573	495	410						
200	540	521	529	508	435	348						
190	483	465	477	446	383	291						
180	432	408	427	389	335	245						
170	384	357	378	341	290	205						
160	335	310	331	298	251	173						
150	286	255	290	262	221	148						
140	240	206	255	226	190	131						
130	214	192	219	197	173	122						
120	198	183	200	185	162	116						
110	40.2	40.2	40.2	71.4		40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 18 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A			
HMIN	277	248	219	234	247	238	236	112	109	111	110	109
HMAX	390	338	330	361	372	351	365	317	330	323	348	361
SHMAX	1004	854	769	676	613	471	582	1056	1669	1924	2394	2846
KM												
390	1500											
380	1485				814							
370	1438			854	813		679					2396
360	1361			854	805	679	678					2396
350	1251			847	784	679	670				2096	2381
340	1111	1528		826	750	671	654				2088	2342
330	939	1515	1073	794	706	649	629		1528	1876	2059	2279
320	754	1462	1063	749	649	615	600	1027	1520	1875	2008	2192
310	524	1370	1035	691	565	567	559	1025	1498	1857	1933	2070
300	286	1240	988	616	467	502	508	1014	1461	1817	1830	1934
290	119	1027	924	540	362	427	441	993	1408	1754	1708	1786
280	40.2	794	842	446	251	344	375	964	1341	1669	1570	1620
270		477	735	335	143	262	302	928	1257	1556	1429	1446
260		179	619	229	67.6	170	226	880	1162	1431	1269	1291
250		26.3	477	127	19.3	77.6	135	820	1050	1283	1111	1127
240			310	49.6		21.7	49.6	747	917	1127	971	990
230			143					655	794	960	844	861
220			12.4					551	655	794	735	745
210								432	551	655	643	652
200								323	454	551	557	565
190								240	375	457	485	492
180								179	316	389	417	435
170								141	267	330	362	383
160								116	226	282	318	339
150								97.2	192	240	276	300
140								85.0	163	212	246	268
130								78.5	143	184	210	229
120								72.6	129	166	189	205
110									60.0		49.6	143

ELECTRON DENSITY

PUERTO RICO 60 W 18 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A				A	A	A					
HMIN	107	109	109	110	109	110		228	234	278	284	269
HMAX	372	371	376	377	366	372		373	408	417	404	392
SHMAX	3133	3034	3163	2959	2557	2315		1581	1478	1280	1115	1146
KM												
420										1583		
410									1528	1578	1583	
400									1523	1549	1581	1640
390									1502	1497	1554	1639
380	2571	2643	2643	2430		2128		1756	1464	1418	1496	1617
370	2571	2643	2638	2425	2260	2127		1755	1411	1319	1404	1563
360	2554	2624	2609	2398	2255	2109		1739	1341	1198	1291	1478
350	2513	2575	2553	2349	2225	2064		1704	1249	1065	1143	1365
340	2448	2494	2471	2273	2168	1984		1648	1153	896	960	1208
330	2359	2381	2356	2171	2078	1882		1573	1027	735	774	1035
320	2245	2244	2220	2055	1962	1760		1468	903	540	540	814
310	2112	2069	2064	1921	1826	1626		1353	768	362	335	591
300	1942	1887	1872	1735	1683	1478		1226	625	198	170	362
290	1766	1688	1688	1572	1540	1324		1080	492	90.5	54.8	179
280	1574	1468	1468	1401	1376	1171		917	362	21.7		71.4
270	1394	1274	1291	1240	1208	1019		716	240			12.4
260	1226	1111	1127	1050	1050	861		508	143			
250	1065	960	990	907	907	729		310	79.7			
240	917	834	854	794	781	619		127	40.2			
230	794	726	745	688	670	529		26.3				
220	698	643	657	608	573	446						
210	616	580	587	540	495	382						
200	547	524	521	487	435	316						
190	483	472	465	442	378	267						
180	429	422	413	397	331	219						
170	380	375	371	354	293	179						
160	335	335	331	314	259	157						
150	286	298	293	274	228	140						
140	255	259	260	237	201	127						
130	235	234	235	214	186	121						
120	224	214	215	200	170	115						
110	161	71.4	71.4	49.6	60.0	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 19 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	259	250	241	246	219	226	239	110	110	109	109	110
HMAX	371	359	344	328	337	338	334	292	333	339	344	356
SHMAX	1060	1019	919	650	678	532	424	791	1625	2168	2470	2781
KM												
380	1612											
370	1611											
360	1592	1640										2500
350	1540	1625	1528								2161	2495
340	1457	1572	1525		896	774	661		1473	1876	2159	2462
330	1341	1481	1490	1215	893	769	660		1473	1869	2137	2398
320	1191	1341	1416	1204	876	748	647		1461	1846	2092	2305
310	1004	1182	1314	1157	846	712	617		1434	1806	2021	2185
300	754	960	1143	1068	803	661	578	982	1392	1750	1917	2032
290	446	698	960	946	747	594	521	982	1334	1677	1798	1855
280	219	417	754	774	670	508	446	968	1262	1584	1669	1669
270	71.4	179	446	573	582	417	371	930	1172	1471	1528	1483
260	12.4	65.7	198	335	477	327	274	880	1077	1353	1394	1291
250		3.1	71.4	83.8	362	219	161	814	971	1712	1255	1096
240					240	112	40.2	735	854	1073	1096	932
230					104	43.3		643	735	932	960	804
220					12.4			540	625	794	834	698
210								427	529	661	716	615
200								310	446	557	608	547
190								226	375	462	516	489
180								165	310	395	439	437
170								130	257	335	380	389
160								108	212	286	335	341
150								92.3	179	244	298	298
140								82.4	152	210	259	262
130								77.6	136	184	229	229
120								72.9	122	169	208	207
110								12.4	49.6	97.2	83.8	40.2

ELECTRON DENSITY

PUERTO RICO 60 W 19 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		R					A					
HMIN	109	110	109	109	110	110	110	222	236	295	280	259
HMAX	352	363	371	383	375	372	346	389	418	427	403	376
SHMAX	2808	2963	2777	2822	2647	2452	1700	1570	1357	1254	1167	1136
KM												
430										1640		
420									1473	1633		
410									1467	1601	1612	
400									1444	1542	1610	
390				2193				1556	1402	1456	1587	
380			2294	2193	2193	2128		1549	1341	1341	1536	1669
370		2500	2293	2176	2191	2128		1527	1257	1198	1456	1663
360	2680	2499	2280	2140	2170	2113		1488	1154	1035	1352	1626
350	2679	2479	2243	2083	2127	2076	1876	1431	1050	861	1208	1556
340	2652	2432	2183	2003	2063	2016	1871	1356	928	661	1050	1456
330	2587	2360	2096	1907	1974	1938	1843	1268	794	446	854	1324
320	2483	2257	1994	1786	1866	1841	1788	1172	661	262	625	1159
310	2339	2132	1861	1654	1734	1721	1708	1061	519	119	403	960
300	2161	1985	1702	1515	1598	1584	1593	950	389	44.9	219	716
290	1948	1820	1540	1371	1446	1431	1460	824	274		83.8	446
280	1715	1636	1376	1224	1291	1283	1308	707	189			219
270	1490	1465	1221	1080	1127	1111	1157	596	122			83.8
260	1265	1274	1065	950	990	960	982	477	77.6			12.4
250	1080	1111	928	834	861	820	774	348	51.7			
240	917	975	814	745	745	691	573	219	17.0			
230	794	848	716	673	652	585	417	97.2				
220	688	745	643	614	573	492	298					
210	615	657	585	559	508	417	219					
200	557	587	529	513	446	356	161					
190	503	527	472	467	389	305	127					
180	457	465	422	421	341	259	99.6					
170	408	406	373	375	295	225	82.2					
160	362	348	327	331	256	193	73.9					
150	323	304	282	290	227	169	69.1					
140	286	274	244	253	203	151	65.9					
130	254	250	217	222	179	138	62.6					
120	231	227	204	204	164	127	57.7					
110	143	49.6	112	127	40.2	12.4	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 20 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S				
HMIN	249	249	222	226	238	217	231	115	109	112	111	114
HMAX	346	365	338	333	343	329	361	304	312	337	349	368
SHMAX	914	1066	737	694	625	505	582	977	1593	1709	2488	2820
KM												
370		1500					735					2260
360		1497					735					2254
350	1583	1471			939		729				2064	2228
340	1576	1419	1240	1073	938		711			1528	2056	2182
330	1526	1341	1228	1071	923	716	683			1524	2030	2117
320	1454	1240	1181	1053	889	711	646		1697	1505	1985	2032
310	1324	1111	1096	1010	834	693	594	1191	1697	1470	1922	1918
300	1119	946	982	946	762	661	527	1189	1681	1414	1832	1798
290	896	735	834	854	667	618	454	1167	1641	1348	1732	1654
280	625	508	661	742	557	560	371	1119	1579	1250	1618	1515
270	335	262	477	608	437	485	286	1050	1492	1161	1495	1371
260	112	97.2	286	446	286	398	198	960	1388	1061	1356	1224
250	12.4	12.4	143	274	127	302	112	854	1255	960	1224	1080
240			71.4	112	26.3	209	56.5	745	1080	848	1080	960
230			42.1	43.3		97.2		631	917	735	939	834
220						30.9		508	754	631	814	729
210								398	608	532	698	634
200								302	487	454	599	549
190								226	389	383	516	477
180								170	316	329	439	412
170								130	262	276	378	356
160								108	215	233	330	310
150								96.1	182	201	286	270
140								90.8	159	175	255	235
130								85.4	141	154	228	213
120								60.0	130	131	205	198
110									71.4			

ELECTRON DENSITY

PUERTO RICO 60 W 20 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A					
HMIN	110	108	110	108	109	110	112	240	217	286	277	284
HMAX	366	373	371	375	365	364	339	375	420	427	399	411
SHMAX	2692	3026	2767	2814	2423	2331	1664	1569	1589	1408	1109	1171
KM												
430										1612		
420									1500	1607		1500
410									1493	1584		1500
400									1472	1543	1556	1488
390									1436	1483	1544	1454
380		2500	2396	2294				1697	1385	1406	1505	1400
370	2260	2499	2396	2291	2161	2227		1695	1318	1319	1437	1323
360	2255	2479	2376	2268	2157	2224		1678	1240	1198	1341	1229
350	2225	2432	2324	2222	2128	2200		1642	1152	1050	1212	1111
340	2168	2360	2227	2151	2071	2149	2000	1589	1050	875	1065	939
330	2071	2257	2109	2052	1980	2071	1986	1514	928	679	875	754
320	1957	2135	1969	1932	1866	1957	1936	1427	807	508	661	557
310	1826	1996	1803	1799	1727	1826	1841	1329	691	310	446	335
300	1683	1820	1631	1654	1584	1669	1712	1204	585	161	251	161
290	1524	1650	1462	1509	1431	1501	1570	1073	467	49.6	104	60.0
280	1371	1465	1291	1356	1283	1321	1394	917	362		30.9	
270	1228	1291	1155	1191	1111	1096	1208	754	270			
260	1107	1143	1016	1035	975	917	1004	557	198			
250	982	993	896	903	854	754	774	286	135			
240	865	865	794	794	745	619	573	12.4	88.3			
230	764	764	709	698	657	524	417		54.8			
220	679	672	643	625	580	446	298		18.0			
210	608	594	585	562	508	383	229					
200	551	534	535	508	446	330	179					
190	498	477	482	457	394	286	141					
180	446	430	429	403	341	248	116					
170	401	385	380	357	295	212	97.2					
160	357	348	339	314	255	182	83.8					
150	314	314	300	283	216	161	75.6					
140	274	278	266	253	191	145	69.5					
130	240	246	239	222	175	136	65.7					
120	222	227	223	205	166	129	61.9					
110	60.0	143	49.6	127	112	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 21 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	290	263	241	242	241	207	240	117	110	110	110	110
HMAX	418	374	374	381	357	297	357	339	315	336	353	
SHMAX	1082	838	881	869	727	373	493	1243	1768	1842	2502	2693
KM												
420	1393											
410	1387											
400	1362											
390	1318			1050								
380	1255	1240	1143	1050								
370	1169	1238	1141	1041								
360	1073	1217	1125	1019	1004		608	960				2327
350	932	1173	1090	983	1000		606	959				2326
340	754	1109	1037	933	980		595	952	1583		2396	2307
330	557	1016	968	868	943		576	940	1578		2390	2263
320	348	889	883	784	893		546	921	1558	2128	2357	2195
310	179	742	768	688	818		512	897	1524	2123	2294	2096
300	71.4	557	643	591	726	774	468	872	1476	2079	2199	1982
290	3.1	335	508	477	619	759	422	837	1411	1986	2075	1846
280		161	375	335	498	658	367	794	1341	1861	1922	1685
270		54.8	229	198	335	594	310	749	1240	1688	1747	1537
260			112	97.2	179	508	240	691	1143	1490	1572	1359
250			53.1	46.5	71.4	417	152	631	1004	1281	1376	1198
240						323	12.4	573	875	1065	1182	1035
230						198		508	729	875	1004	896
220						90.5		439	608	704	848	774
210						30.9		362	508	596	716	667
200								278	417	508	608	573
190								205	348	432	500	495
180								149	291	367	410	429
170								112	236	310	346	378
160								94.5	198	270	298	330
150								82.8	161	233	258	286
140								77.9	135	198	224	246
130								72.9	122	174	209	231
120								54.8	115	152	194	219
110									49.6	40.2	49.6	40.2

ELECTRON DENSITY

PUERTO RICO 60 W 21 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL					A	A	A					
HMIN	108	108	109	109	110			239	259	266	269	259
HMAX	367	368	375	378	368			388	400	407	391	383
SHMAX	2730	2784	2676	2671	2385			1435	1269	1296	1119	1087
KM												
410										1528		
400									1528	1523	1528	
390								1612	1517	1500	1528	1473
380			2193	2193				1605	1486	1458	1512	1472
370	2260	2260	2191	2186	2064			1580	1433	1396	1471	1453
360	2254	2252	2167	2155	2057			1535	1359	1314	1404	1409
350	2224	2222	2120	2101	2028			1470	1260	1216	1308	1341
340	2170	2167	2049	2021	1978			1379	1154	1096	1191	1249
330	2091	2083	1941	1917	1907			1274	1019	946	1050	1131
320	1982	1982	1822	1798	1806			1155	861	794	875	982
310	1853	1853	1695	1654	1692			1019	698	608	679	814
300	1702	1721	1556	1509	1556			875	524	417	446	625
290	1540	1584	1401	1356	1416			716	348	240	240	403
280	1386	1433	1255	1182	1269			540	189	104	97.2	198
270	1240	1298	1096	1035	1096			375	83.8	43.3	12.4	77.6
260	1096	1167	960	903	960			219	12.4			12.4
250	971	1027	854	794	820			97.2				
240	854	903	762	709	691			12.4				
230	762	794	687	643	599							
220	679	698	622	585	521							
210	608	615	568	535	462							
200	547	547	513	486	412							
190	498	487	457	437	366							
180	446	437	400	393	320							
170	403	393	353	350	272							
160	358	348	314	314	233							
150	318	310	267	276	201							
140	274	276	233	240	183							
130	243	243	214	216	172							
120	226	225	203	204	163							
110	161	143	60.0	60.0	40.2							

ELECTRON DENSITY

PUERTO RICO 60 W 22 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	
HMIN	268	245	222	224	249	243	219	116	110	110	109	110
HMAX	372	340	347	367	360	352	347	326	322	327	353	364
SHMAX	913	765	802	721	503	460	546	1084	1523	2012	2546	2921
KM												
380	1420											
370	1419			834								2362
360	1398			831	735	679					2161	2360
350	1348		982	819	728	679	661				2160	2342
340	1265	1316	979	798	703	669	659				2142	2304
330	1164	1300	965	766	665	646	648	1004	1446	2032	2102	2247
320	1004	1253	939	725	618	611	629	1003	1446	2024	2039	2169
310	814	1175	898	673	549	560	601	994	1436	1989	1945	2064
300	591	1061	849	601	467	492	565	977	1411	1923	1834	1944
290	362	875	786	524	380	408	519	951	1372	1819	1708	1813
280	143	679	707	446	286	327	459	920	1314	1695	1570	1669
270	26.3	446	608	348	179	229	396	879	1247	1556	1416	1501
260		179	492	251	83.8	127	329	828	1167	1394	1269	1324
250		46.5	362	149	12.4	54.8	255	762	1068	1221	1143	1159
240			179	77.6			170	687	960	1050	1004	1004
230			60.0	40.2			83.8	599	834	889	889	861
220							12.4	508	698	745	784	742
210								403	573	643	688	634
200								302	457	540	591	553
190								219	371	457	508	489
180								165	294	382	432	437
170								132	236	320	367	393
160								108	198	267	314	350
150								89.8	164	231	274	306
140								80.7	140	201	240	266
130								75.6	129	176	204	231
120								60.0	118	158	186	208
110									40.2	40.2	127	112

ELECTRON DENSITY

PUERTO RICO 60 W 22 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A	A	A	A		
HMIN	109	112	109	109	109	110		229	235	259	280	261
HMAX	356	359	361	364	363	377		352	401	404	396	381
SHMAX	2823	2828	2893	2770	2437	2369		1248	1632	1254	1069	971
KM												
410									1612	1556		
400									1611	1554	1528	
390									1603	1532	1523	1393
380						1938			1580	1486	1492	1393
370			2500	2362	2064	1933			1543	1408	1429	1377
360	2643	2716	2500	2359	2063	1911		1786	1491	1311	1341	1335
350	2637	2700	2484	2337	2045	1872		1785	1424	1198	1226	1266
340	2599	2644	2440	2289	2006	1814		1761	1349	1065	1080	1172
330	2526	2546	2370	2216	1945	1732		1702	1250	917	896	1050
320	2415	2413	2269	2114	1856	1638		1601	1143	735	698	903
310	2260	2237	2145	1990	1747	1531		1483	1016	573	477	716
300	2087	2032	1985	1846	1618	1411		1324	875	417	262	524
290	1866	1786	1806	1685	1487	1291		1143	716	262	112	310
280	1646	1534	1631	1519	1341	1175		917	557	152		152
270	1420	1321	1446	1356	1208	1050		679	403	71.4		65.7
260	1208	1127	1274	1191	1061	928		362	240	12.4		
250	1035	946	1111	1035	939	814		179	119			
240	889	814	960	889	824	707		77.6	46.5			
230	768	716	824	774	716	616		12.4				
220	672	636	716	679	636	529						
210	602	573	625	599	562	446						
200	546	519	549	527	495	375						
190	492	472	483	462	432	310						
180	442	426	432	403	367	258						
170	394	384	385	353	315	215						
160	348	343	348	314	270	179						
150	307	302	314	276	233	153						
140	272	262	276	246	201	134						
130	240	234	243	219	178	123						
120	219	209	221	198	166	116						
110	112		127	49.6	97.2	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 23 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	280	254	229	222	256	240	233	110	109	109	110	110
HMAX	374	347	320	359	374	349	366	315	332	334	358	371
SHMAX	802	690	568	571	544	443	547	990	1641	2074	2465	2674
KM												
380	1393				735							2193
370	1390				734		643					2193
360	1358			735	723		642				2000	2179
350	1282	1265		730	699	643	633				1994	2141
340	1179	1256		711	663	638	618		1420	1907	1971	2080
330	1035	1213		679	618	621	594		1419	1905	1929	1990
320	834	1131	1004	631	553	591	567	1004	1411	1887	1861	1880
310	608	1016	992	573	477	550	531	1003	1390	1850	1786	1747
300	335	834	955	502	396	495	477	991	1358	1792	1688	1612
290	112	625	892	432	310	425	410	967	1309	1710	1578	1462
280		362	794	362	209	348	342	929	1256	1617	1446	1312
270		161	661	294	97.2	262	262	880	1188	1501	1316	1179
260		49.6	492	226	40.2	161	173	820	1105	1368	1191	1038
250			262	149		71.4	104	747	1013	1224	1061	917
240			97.2	83.8		3.1	49.6	665	917	1065	932	810
230			12.4	46.5				582	814	903	824	716
220								492	707	742	726	649
210								408	596	608	634	580
200								318	487	508	557	524
190								248	398	429	483	472
180								189	323	367	423	422
170								147	262	320	362	373
160								125	215	278	315	327
150								110	179	240	276	286
140								94.7	157	209	243	254
130								86.3	141	182	219	231
120								73.0	127	164	189	204
110								12.4	71.4	97.2	40.2	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 23 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A						B			A		
HMIN	110	110	110	109	109	110	110	250	269	260	286	322
HMAX	371	388	394	382	383	382	406	384	447	410	453	454
SHMAX	2968	3376	3265	2848	2772	2509	2396	1512	1477	1173	1439	1016
KM												
460											1393	1316
450									1473		1393	1314
440									1470		1384	1295
430									1452		1363	1256
420									1419		1332	1191
410							1876		1371	1500	1289	1119
400			2607				1873		1305	1487	1234	1016
390		2680	2605	2571	2362	2260	1858	1786	1230	1448	1173	889
380	2465	2671	2580	2571	2360	2259	1828	1784	1133	1383	1096	742
370	2465	2638	2529	2543	2339	2239	1784	1763	1027	1291	1004	585
360	2449	2579	2450	2478	2292	2189	1726	1720	907	1179	886	417
350	2407	2494	2331	2362	2218	2096	1651	1650	784	1050	754	262
340	2338	2381	2201	2220	2109	1982	1564	1556	661	889	619	143
330	2238	2249	2048	2050	1976	1853	1457	1446	540	729	477	60.0
320	2118	2087	1872	1866	1831	1712	1352	1312	427	573	335	
310	1969	1907	1702	1650	1669	1556	1229	1159	310	403	209	
300	1816	1727	1524	1465	1509	1386	1119	982	219	262	90.5	
290	1650	1537	1359	1274	1341	1226	990	794	132	152	40.2	
280	1478	1359	1191	1080	1162	1065	865	591	71.4	88.3		
270	1308	1182	1050	932	1004	917	742	362	12.4	49.6		
260	1157	1019	917	814	875	784	631	161				
250	1019	889	804	716	764	679	532	12.4				
240	896	786	716	637	670	591	446					
230	784	709	649	579	587	516	375					
220	688	643	593	532	521	459	316					
210	608	593	545	490	462	400	267					
200	536	545	504	453	412	346	223					
190	483	499	464	417	366	295	186					
180	434	455	425	386	325	249	155					
170	393	414	385	352	289	212	131					
160	353	379	347	317	256	179	112					
150	306	343	316	286	225	154	98.5					
140	266	298	282	257	198	135	89.7					
130	237	261	244	228	178	123	80.4					
120	222	242	221	206	167	116	68.6					
110	40.2	49.6	49.6	127	112	40.2	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 24 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	296	271	226	237	239	231	258	117	109	110	108	109
HMAX	417	394	375	383	419	415	392	334	346	334	362	372
SHMAX	966	1092	932	806	764	722	703	1228	2082	2236	2833	3064
KM												
420	1290				774	754						
410	1285				771	753						
400	1261	1367			759	744	814					
390	1216	1366		875	739	724	813					
380	1150	1350	1004	875	709	693	806					2536
370	1068	1316	1003	867	670	655	789				2396	2535
360	960	1265	993	851	625	608	761				2395	2518
350	820	1195	972	824	573	553	724		1846		2378	2475
340	661	1115	939	790	513	489	679	1191	1843	2260	2337	2408
330	492	1004	898	749	453	429	619	1190	1823	2257	2271	2315
320	310	854	846	691	389	367	560	1178	1787	2229	2182	2197
310	143	698	781	629	318	310	485	1153	1732	2168	2067	2048
300	44.9	508	707	549	255	257	398	1110	1660	2071	1934	1889
290		286	616	467	198	204	302	1060	1573	1948	1769	1708
280		97.2	519	371	143	155	209	997	1468	1801	1604	1537
270			417	278	101	112	104	917	1341	1620	1446	1359
260			302	179	67.6	78.9	26.3	834	1198	1429	1274	1191
250			198	90.5	43.9	54.8		745	1050	1240	1111	1038
240			97.2	30.9	3.1	36.2		643	903	1027	960	917
230			40.2					529	768	854	834	794
220								437	643	704	716	698
210								344	540	591	616	615
200								270	446	500	540	540
190								214	375	425	469	471
180								172	315	362	412	412
170								141	262	305	366	366
160								121	219	258	325	323
150								108	187	219	286	283
140								97.2	165	191	244	253
130								86.9	148	174	219	222
120								60.0	135	164	203	207
110									83.8	60.0	127	83.8

ELECTRON DENSITY

PUERTO RICO 60 W 24 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A	A	A					
HMIN	109	108	109	109	109	109		272	267	267	270	283
HMAX	376	384	379	380	377	389		385	401	412	399	409
SHMAX	3159	3296	3205	2760	2410	2326		1179	1163	1164	997	1015
KM												
420										1393		
410									1420	1393		1290
400									1420	1380	1341	1283
390		2643				1846		1556	1408	1347	1332	1259
380	2571	2641	2571	2128	1846	1839		1553	1379	1295	1301	1216
370	2567	2617	2562	2119	1842	1814		1530	1327	1222	1247	1157
360	2540	2567	2530	2091	1823	1772		1485	1255	1133	1167	1086
350	2490	2489	2474	2045	1790	1713		1408	1169	1027	1073	982
340	2415	2381	2395	1981	1740	1634		1298	1065	903	946	848
330	2316	2249	2294	1896	1676	1545		1187	932	768	794	698
320	2187	2096	2173	1786	1590	1433		1065	774	619	625	524
310	2032	1925	2032	1669	1496	1320		889	608	462	446	335
300	1866	1752	1855	1542	1388	1247		698	446	286	286	179
290	1669	1574	1685	1401	1265	1107		462	262	143	143	60.0
280	1490	1394	1519	1265	1131	982		240	112	71.4	65.7	
270	1308	1224	1324	1143	1004	861			40.2	19.3	3.1	
260	1157	1080	1143	1016	896	754						
250	1019	946	990	900	794	661						
240	886	834	861	804	709	582						
230	774	747	754	716	643	514						
220	679	679	679	643	583	457						
210	608	615	602	579	536	406						
200	540	553	540	519	492	351						
190	487	498	477	459	451	298						
180	437	442	417	400	406	246						
170	389	394	366	341	348	209						
160	344	350	323	294	286	179						
150	306	314	282	249	236	159						
140	269	274	244	215	196	145						
130	239	243	218	196	177	136						
120	224	226	205	186	165	128						
110	127	161	97.2	143	60.0	49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 25 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A	A		
HMIN	282	249	236	241	288	256	253	112	109	111	108	108
HMAX	386	361	363	419	423	397	360	314	327	338	341	355
SHMAX	775	770	695	808	583	604	662	1194	1727	2255	2534	2914
KM												
430					754							
420				774	754							
410				771	743							
400				761	719	754						
390	1265			744	679	751						
380	1259			719	631	737						
370	1225	1119	917	688	573	709						
360	1160	1119	916	651	500	669	896					2716
350	1061	1107	905	603	417	618	889				2396	2712
340	932	1074	878	551	342	553	868			2096	2396	2677
330	774	1017	838	492	255	485	834		1669	2088	2377	2609
320	573	943	781	432	179	408	788	1341	1664	2059	2328	2501
310	362	844	707	368	104	335	724	1340	1640	2008	2247	2370
300	179	716	619	304	60.0	255	643	1323	1597	1933	2135	2199
290	65.7	585	519	240	12.4	179	540	1288	1530	1830	1996	1990
280		417	408	186		112	432	1233	1446	1708	1820	1786
270		219	298	132		63.8	310	1164	1341	1570	1650	1556
260		77.6	161	80.7		26.3	143	1073	1226	1416	1446	1341
250		12.4	77.6	47.2				960	1096	1257	1260	1119
240			26.3					820	960	1080	1111	946
230								679	820	917	932	807
220								524	691	768	781	698
210								389	582	631	661	615
200								294	477	524	565	540
190								219	396	439	485	483
180								170	323	362	417	427
170								132	262	305	362	375
160								108	215	258	315	330
150								95.6	179	219	272	286
140								90.3	156	191	233	248
130								84.9	141	174	201	217
120								75.6	132	164	188	204
110									83.8		161	143

ELECTRON DENSITY

PUERTO RICO 60 W 25 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						C	C	C	C	C	C	C
HMIN	110	109	109	110	109							
HMAX	359	388	377	396	399							
SHMAX	2975	3595	3097	3174	2987							
KM												
400				2396	2294							
390		2865		2392	2285							
380		2856	2571	2371	2257							
370		2822	2565	2330	2207							
360	2753	2761	2532	2269	2133							
350	2738	2673	2471	2189	2041							
340	2685	2557	2378	2079	1919							
330	2594	2415	2267	1957	1798							
320	2459	2256	2128	1826	1652							
310	2294	2053	1969	1683	1501							
300	2105	1866	1786	1534	1356							
290	1907	1669	1612	1356	1224							
280	1692	1465	1429	1191	1073							
270	1468	1274	1257	1050	950							
260	1281	1127	1080	928	844							
250	1096	993	946	824	747							
240	946	886	824	732	672							
230	807	786	726	661	608							
220	698	701	650	602	551							
210	615	629	593	546	503							
200	540	560	540	498	451							
190	477	495	490	451	403							
180	427	437	435	403	353							
170	381	389	383	362	310							
160	343	340	335	318	272							
150	310	298	294	282	237							
140	276	259	249	246	204							
130	243	234	219	215	179							
120	223	220	205	189	166							
110	40.2	60.0	112	12.4	60.0							

ELECTRON DENSITY

PUERTO RICO 60 W 26 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	C	C	C	C	C	C	C	C	C	C	C	C

ELECTRON DENSITY

PUERTO RICO 60 W 26 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A					A	B					
HMIN	110	109	110	109	110	111		239	284	307	295	278
HMAX	381	367	378	396	399	407		413	436	430	413	401
SHMAX	2989	2725	2958	2840	2484	2444		1682	1529	1332	1187	1270
KM												
440									1640			
430									1637	1612		
420								1669	1617	1495	1697	
410						1756		1668	1581	1547	1696	1669
400				1969	1756	1753		1655	1521	1466	1670	1668
390	2327			1966	1751	1739		1627	1453	1353	1610	1653
380	2327		2362	1951	1732	1713		1583	1360	1208	1518	1613
370	2314	2396	2355	1922	1699	1674		1519	1251	1027	1386	1546
360	2279	2388	2326	1874	1649	1624		1446	1131	834	1224	1455
350	2222	2349	2276	1819	1582	1562		1359	990	643	1050	1341
340	2141	2271	2205	1752	1509	1480		1251	834	446	854	1191
330	2042	2161	2107	1669	1427	1394		1119	679	262	625	1027
320	1907	2032	1994	1574	1332	1301		982	492	112	362	814
310	1771	1876	1861	1468	1240	1201		834	323	40.2	161	573
300	1626	1719	1712	1362	1133	1105		691	179		49.6	335
290	1487	1537	1556	1251	1038	1004		540	71.4			127
280	1354	1359	1386	1131	943	896		389				26.3
270	1218	1198	1226	1016	859	794		262				
260	1096	1050	1080	909	778	698		152				
250	975	907	939	818	704	615		67.6				
240	865	804	814	742	643	540		12.4				
230	770	709	707	679	585	471						
220	688	636	629	619	535	412						
210	608	568	562	568	482	369						
200	540	513	508	513	432	327						
190	471	462	459	462	383	286						
180	417	417	413	408	335	245						
170	367	377	371	362	298	198						
160	327	339	328	321	262	164						
150	282	302	293	286	229	140						
140	248	260	260	253	196	126						
130	231	236	236	224	176	120						
120	219	223	222	205	165	114						
110	12.4	97.2	40.2	112	40.2							

ELECTRON DENSITY

PUERTO RICO 60 W 27 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							S	A	A	A	A	A
HMIN	272	244	238	270	268	245	276	113	110	110	109	
HMAX	385	362	396	420	401	382	403	333	340	342	348	
SHMAX	1139	1008	1104	954	816	783	921	1585	2134	2252	2504	
KM												
420				1119								
410				1111	1096		1119					
400			1119	1088	1096		1118					
390	1697		1117	1050	1083	1004	1106					
380	1693		1105	992	1050	1004	1078					
370	1660	1446	1083	924	992	992	1033					
360	1592	1446	1050	834	917	964	973					
350	1490	1427	1004	742	834	917	900			2193	2161	
340	1356	1381	948	634	729	854	814	1727	2000	2193	2153	
330	1182	1304	882	529	619	784	716	1726	1990	2173	2124	
320	960	1208	810	417	498	688	608	1708	1961	2126	2073	
310	716	1084	726	298	362	585	477	1667	1913	2050	1993	
300	446	932	643	189	219	477	335	1604	1843	1941	1895	
290	219	735	540	104	119	362	209	1516	1764	1813	1773	
280	71.4	540	437	54.8	65.7	251	60.0	1411	1656	1650	1643	
270		310	310		12.4	143		1283	1524	1465	1509	
260		119	179			79.7		1096	1371	1281	1368	
250		49.6	77.6			33.2		939	1228	1111	1224	
240			21.7					774	1096	932	1065	
230								591	932	781	932	
220								446	716	655	794	
210								327	540	557	667	
200								248	403	477	565	
190								184	294	410	492	
180								143	232	348	425	
170								112	187	286	367	
160								93.4	151	229	318	
150								83.8	135	186	278	
140								80.1	125	164	240	
130								76.3	120	155	214	
120								72.6	115	147	198	
110									40.2	49.6	127	

ELECTRON DENSITY

PUERTO RICO 60 W 27 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A					
HMIN	106	112	111	108	114	109	115	277	267	283	279	279
HMAX	377	376	381	389	392	398	389	412	420	427	424	411
SHMAX	3232	3092	3006	2773	2649	2395	1950	1534	1493	1425	1425	1366
KM												
430										1727	1727	
420								1697	1669	1721	1725	1727
410								1697	1659	1692	1703	1727
400					2000	1816		1684	1629	1640	1658	1712
390			2327	2096	2000	1811	1786	1652	1581	1564	1590	1674
380	2536	2500	2327	2088	1988	1792	1778	1602	1509	1466	1496	1613
370	2530	2496	2315	2062	1961	1759	1751	1530	1425	1341	1381	1528
360	2503	2470	2284	2017	1917	1711	1705	1446	1316	1191	1240	1433
350	2452	2421	2232	1954	1850	1646	1634	1341	1184	1019	1080	1291
340	2379	2348	2161	1866	1776	1571	1546	1212	1035	814	896	1111
330	2282	2249	2061	1762	1678	1476	1446	1080	875	625	679	896
320	2172	2132	1952	1643	1576	1373	1329	917	698	432	477	643
310	2032	1985	1826	1515	1459	1263	1208	735	508	240	286	417
300	1855	1820	1683	1381	1341	1154	1084	540	348	112	143	198
290	1685	1650	1540	1253	1198	1059	946	335	198	53.1	67.6	83.8
280	1524	1465	1386	1131	1073	939	807	83.8	97.2		12.4	12.4
270	1359	1291	1240	1016	950	834	679		30.9			
260	1198	1143	1084	896	844	735	562					
250	1061	993	960	794	735	643	462					
240	932	875	854	710	652	567	375					
230	824	774	754	649	580	495	304					
220	732	679	670	595	524	435	240					
210	650	608	591	550	477	373	189					
200	580	540	521	503	438	320	140					
190	521	487	462	457	394	278	107					
180	467	437	409	403	348	237	89.2					
170	417	389	366	353	306	202	79.7					
160	375	352	328	314	266	170	72.8					
150	332	314	293	272	234	146	69.0					
140	294	272	249	227	204	131	65.9					
130	260	238	216	198	177	122	62.8					
120	234	219	201	186	161	115	57.4					
110	204			127		60.0						

ELECTRON DENSITY

PUERTO RICO 60 W 28 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	
HMIN	268	252	258	232	238	217	269	111	109	112	107	105
HMAX	380	384	368	359	385	390	383	309	331	334	338	357
SHMAX	960	1040	892	775	778	758	639	1122	1800	2088	2275	2655
KM												
390		1316			875	774	875					
380	1473	1314			874	770	874					
370	1458	1298	1290		863	757	862					
360	1410	1264	1283	1004	842	736	834					2260
350	1331	1208	1253	998	810	706	788					2254
340	1226	1143	1201	974	769	670	729		1727	1876	2032	2226
330	1080	1050	1127	932	716	623	657		1727	1875	2025	2174
320	896	917	1027	875	655	573	573		1715	1858	1997	2092
310	679	774	896	802	582	513	485	1341	1686	1822	1947	1994
300	446	619	735	716	500	446	375	1332	1631	1764	1869	1866
290	240	462	540	619	417	382	251	1301	1568	1691	1774	1719
280	83.8	286	310	519	323	316	127	1247	1483	1603	1656	1556
270	21.7	143	127	403	219	251	12.4	1167	1376	1495	1528	1386
260		60.0	26.3	286	127	186		1073	1253	1368	1386	1226
250				152	63.8	127		960	1143	1226	1228	1080
240				65.7	12.4	77.6		834	990	1096	1096	946
230						51.7		691	848	960	946	824
220						12.4		529	704	834	807	726
210								389	562	698	679	643
200								274	446	573	573	573
190								198	344	469	492	508
180								148	268	389	425	446
170								114	215	320	367	394
160								95.0	176	267	320	341
150								83.8	148	227	278	295
140								79.5	127	198	243	251
130								75.3	121	174	205	210
120								69.5	116	155	186	192
110									71.4		143	181

ELECTRON DENSITY

PUERTO RICO 60 W 28 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	B				A	A	A	A				
HMIN	107	107	109	109	109			254	275	281	303	271
HMAX	376	363	377	383	396			413	430	428	428	405
SHMAX	3134	2767	2878	2729	2629			1497	1665	1361	1367	1629
KM												
430									1816	1727	1876	
420								1640	1806	1718	1865	
410								1639	1776	1681	1821	2032
400					1969			1623	1726	1617	1743	2028
390				2096	1966			1587	1656	1523	1626	2000
380	2430		2260	2095	1949			1524	1566	1401	1478	1945
370	2427	2430	2255	2080	1917			1446	1457	1255	1301	1861
360	2404	2429	2231	2046	1870			1351	1327	1080	1096	1747
350	2360	2405	2188	1994	1807			1240	1175	917	889	1612
340	2296	2350	2124	1923	1727			1119	1019	716	643	1446
330	2211	2260	2041	1826	1638			990	834	524	389	1216
320	2102	2146	1929	1715	1531			848	625	335	179	960
310	1976	2000	1810	1593	1407			679	417	189	60.0	698
300	1831	1838	1669	1460	1278			524	219	97.2		477
290	1669	1669	1524	1329	1155			362	104	49.6		219
280	1501	1501	1371	1204	1027			219	43.3			71.4
270	1341	1321	1221	1084	907			104				
260	1184	1127	1065	960	804			46.5				
250	1050	975	939	854	709							
240	928	848	834	764	631							
230	824	745	735	687	568							
220	732	665	657	619	513							
210	661	596	591	562	462							
200	594	535	527	503	412							
190	532	482	471	446	355							
180	467	427	417	389	295							
170	412	380	366	340	246							
160	366	339	321	295	205							
150	325	302	282	255	179							
140	286	258	248	222	165							
130	253	224	217	197	155							
120	228	208	203	184	148							
110	179	161	127	83.8	83.8							

ELECTRON DENSITY

PUERTO RICO 60 W 29 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A	A	A	
HMIN	239	234	218	252	237	231	279	116	114	114	115	116
HMAX	339	368	385	374	377	436	418	333	333	346	344	352
SHMAX	974	1140	1020	735	742	852	917	1519	1838	2328	2425	2457
KM												
440						754						
430						753						
420						746	1004					
410						732	1001					
400						711	987					
390			1050			684	963					
380			1048	1027	875	650	930					
370		1420	1038	1025	872	612	889					
360		1413	1016	1008	859	569	827					2193
350		1387	985	970	834	519	754			2193	2327	2193
340	1669	1341	941	910	797	465	679	1500	1938	2189	2325	2174
330	1650	1269	887	834	749	408	585	1500	1936	2163	2299	2130
320	1584	1187	826	745	691	356	487	1487	1917	2114	2244	2058
310	1460	1084	747	634	622	305	375	1457	1872	2040	2161	1952
300	1308	960	661	519	540	257	251	1411	1803	1945	2043	1834
290	1119	807	573	389	446	211	127	1348	1708	1826	1907	1685
280	875	643	477	240	353	165	12.4	1265	1593	1683	1727	1540
270	608	446	371	119	251	123		1172	1446	1501	1537	1386
260	335	262	274	56.5	143	87.2		1061	1291	1301	1341	1224
250	112	112	179		71.4	57.9		932	1096	1111	1175	1080
240	12.4	49.6	104		19.3	40.2		794	917	932	990	939
230			56.5					667	735	768	834	814
220			12.4					540	562	643	691	707
210								427	432	540	585	608
200								327	327	454	492	532
190								257	255	382	425	465
180								198	192	323	362	406
170								155	142	272	310	356
160								129	125	227	266	305
150								110	118	190	228	259
140								98.4	110	171	203	227
130								91.2	104	158	189	209
120								84.5	97.2	145	167	179

ELECTRON DENSITY

PUERTO RICO 60 W 29 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							8					
HMIN	113	115	113	112	112	115		243	247	263	265	280
HMAX	364	371	382	385	378	390		391	418	422	429	421
SHMAX	2967	2943	3031	2759	2488	2446		1440	1525	1381	1313	990
KM												
430										1500	1341	1290
420									1556	1500	1336	1290
410									1550	1489	1318	1276
400								1697	1530	1461	1288	1240
390			2362	2096		1876		1697	1493	1416	1245	1175
380		2396	2361	2093	2000	1869		1683	1441	1355	1189	1104
370	2643	2396	2347	2076	1994	1848		1646	1373	1274	1123	993
360	2641	2382	2313	2040	1969	1812		1586	1286	1182	1041	861
350	2613	2347	2260	1986	1924	1762		1496	1186	1073	939	729
340	2554	2289	2187	1915	1854	1698		1388	1073	946	824	608
330	2464	2209	2091	1816	1776	1616		1265	946	794	704	462
320	2335	2102	1982	1711	1678	1523		1127	807	643	573	323
310	2190	1976	1846	1593	1556	1415		960	667	477	432	198
300	2014	1831	1698	1460	1433	1303		794	529	323	286	104
290	1826	1669	1540	1329	1303	1191		608	398	189	170	56.5
280	1612	1509	1386	1208	1159	1084		417	262	104	83.8	
270	1411	1341	1221	1096	1027	971		240	143	44.9	33.2	
260	1216	1184	1065	971	907	854		127	71.4			
250	1019	1038	928	865	794	745		53.1	19.3			
240	875	917	814	764	701	643						
230	774	804	726	687	622	557						
220	679	698	655	615	553	483						
210	608	616	587	551	495	410						
200	547	540	527	489	442	346						
190	489	477	465	435	394	291						
180	432	412	408	384	348	240						
170	380	366	366	340	302	202						
160	330	332	328	294	262	167						
150	276	294	286	254	229	142						
140	235	256	240	219	198	126						
130	214	231	214	195	175	120						
120	201	204	200	183	162	113						

ELECTRON DENSITY

PUERTO RICO 60 W 30 APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	269	235	248	248	237	222	262	119	110	110	109	109
HMAX	388	392	384	374	369	370	384	329	320	332	336	350
SHMAX	887	1018	783	648	647	552	646	1240	1695	2118	2230	2577
KM												
400		1096										
390	1290	1095	960				794					
380	1281	1088	959	907			793					
370	1246	1068	947	905	774	661	784					
360	1184	1037	921	889	770	655	766					
350	1104	995	879	854	756	637	738					2294
340	982	942	827	805	732	608	700			2032	2161	2281
330	848	875	754	739	698	569	653	1215		2031	2155	2242
320	698	786	670	652	656	524	594	1210	1727	2015	2121	2177
310	524	698	582	551	602	471	516	1191	1717	1976	2057	2081
300	335	591	487	446	534	412	427	1159	1686	1914	1952	1969
290	179	477	380	323	462	355	310	1111	1631	1823	1826	1831
280	77.6	362	274	209	380	298	189	1055	1568	1715	1683	1683
270	12.4	240	161	117	286	240	71.4	978	1476	1584	1501	1519
260		143	77.6	60.0	179	184		892	1365	1429	1324	1341
250		75.6	21.7	12.4	83.8	122		804	1221	1257	1159	1162
240		33.2			30.9	71.4		704	1050	1080	990	990
230						42.5		608	889	917	848	848
220								508	716	754	735	716
210								398	573	619	643	616
200								302	457	508	560	540
190								224	368	432	485	477
180								175	298	362	417	427
170								143	245	310	356	384
160								124	205	266	305	335
150								108	177	231	262	286
140								96.4	155	198	232	237
130								88.0	139	176	202	215
120								40.2	129	157	185	202
110									12.4	12.4	112	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 30 APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL					A		8					
HMIN	115	117	110	110	112	110		237	227	245	283	273
HMAX	362	376	377	388	398	387		387	372	416	390	381
SHMAX	2632	2801	2680	2843	2627	2330		1429	1047	1014	782	804
KM												
420										1167		
410										1164		
400					2032					1144		
390				2193	2026	1846		1697		1106	1215	1215
380		2294	2193	2187	2005	1842		1691	1290	1050	1200	1215
370	2227	2289	2188	2162	1967	1823		1662	1290	978	1154	1199
360	2226	2264	2159	2118	1913	1790		1608	1275	892	1077	1157
350	2209	2216	2107	2054	1839	1740		1526	1241	804	971	1086
340	2166	2141	2032	1964	1756	1676		1420	1186	704	848	993
330	2083	2042	1928	1863	1656	1590		1291	1111	596	716	875
320	1990	1919	1799	1747	1528	1490		1157	1016	487	557	735
310	1880	1786	1669	1612	1394	1383		990	917	371	389	591
300	1742	1620	1524	1462	1265	1265		814	794	274	219	389
290	1598	1462	1371	1312	1111	1154		643	661	186	97.2	219
280	1446	1291	1221	1179	975	1035		477	524	122		71.4
270	1298	1143	1065	1050	848	907		335	389	80.7		
260	1157	990	932	917	742	794		198	240	52.2		
250	1016	865	824	804	643	688		97.2	135	21.7		
240	886	764	732	716	568	591		30.9	65.7			
230	784	687	650	643	508	514			19.3			
220	688	628	591	579	459	446						
210	615	578	540	524	413	389						
200	551	531	495	477	371	331						
190	492	482	451	430	331	286						
180	441	429	408	385	290	244						
170	389	381	362	344	245	209						
160	348	340	318	303	202	179						
150	310	300	282	266	167	154						
140	262	259	246	229	148	137						
130	235	234	219	201	138	125						
120	209	198	205	187	131	117						
110			40.2	60.0		12.4						

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	27	27	27	27	27	28	28	26	25	25	25	21
HMIN	262	246	227	228	239	243	266	113	110	110	109	109
NMAX	1441	1310	1055	835	717	654	699	1180	1681	2049	2212	2418
HMAX	367	353	346	359	376	380	383	317	317	326	335	351
SHMAX	908	852	764	666	583	530	544	1091	1608	2038	2343	2721
SHINF	4973	4548	3739	3022	2605	2375	2514	4419	6349	7820	8583	9543
KM												
950	130	109	85.5	72.8	67.6	63.9	68.5	83.0	118	150	169	201
900	166	140	110	93.4	86.8	81.9	87.9	106	151	192	217	257
850	213	180	141	120	111	105	113	137	193	246	279	330
800	273	230	180	153	142	134	144	175	248	315	357	423
750	349	294	231	196	182	172	184	224	318	404	457	540
700	444	376	294	250	232	218	234	287	406	516	584	690
650	564	477	374	317	293	276	297	365	518	657	743	877
600	709	602	472	399	369	346	372	463	657	833	941	1107
550	881	752	590	497	456	426	458	583	827	1047	1180	1383
500	1071	921	725	605	551	511	551	725	1028	1299	1458	1698
490	1109	956	753	628	570	528	569	755	1071	1353	1517	1763
480	1148	991	781	650	589	544	587	786	1116	1407	1577	1829
470	1185	1026	809	672	607	559	604	818	1161	1463	1637	1895
460	1222	1061	837	693	624	574	621	849	1206	1518	1697	1960
450	1257	1095	864	714	641	587	636	881	1252	1574	1757	2023
440	1290	1127	891	733	656	600	649	913	1297	1629	1816	2085
430	1321	1158	916	752	670	610	661	945	1343	1684	1874	2145
420	1349	1188	941	769	682	619	672	976	1387	1737	1930	2201
410	1373	1215	963	784	692	624	679	1007	1431	1789	1983	2252
400	1392	1238	983	796	698	627	683	1036	1472	1838	2033	2298
390	1406	1259	1001	805	700	625	682	1063	1512	1884	2078	2338
380	1411	1274	1015	810	698	619	675	1089	1549	1926	2118	2371
370	1405	1283	1026	811	690	605	661	1112	1583	1963	2152	2395
360	1381	1285	1030	806	676	586	639	1132	1612	1994	2179	2408
350	1335	1274	1027	795	653	559	607	1149	1637	2018	2198	2409
340	1265	1251	1015	774	623	525	566	1162	1656	2035	2206	2389
330	1169	1207	992	745	583	485	515	1170	1668	2041	2198	2345
320	1038	1139	956	704	535	439	455	1171	1671	2033	2169	2274
310	877	1047	904	653	477	392	381	1164	1662	2005	2113	2174
300	690	923	836	591	412	341	307	1145	1636	1951	2029	2049
290	499	767	749	520	343	286	237	1113	1589	1870	1918	1900
280	318	590	646	442	273	229	176	1066	1521	1764	1785	1733
270	168	395	526	360	198	176	125	1001	1429	1629	1632	1556
260	65.9	219	401	277	130	127	81.5	919	1316	1473	1466	1376
250	17.6	79.7	276	192	76.5	82.1	45.5	821	1182	1300	1294	1196
240	1.0	18.5	159	120	36.2	46.6	20.0	711	1039	1120	1125	1029
230		2.1	71.9	62.4	15.3	23.6	5.1	591	884	939	959	884
220			19.9	25.6	4.9	8.8	.6	472	723	775	808	762
210			2.7	5.1	1.5	2.6		364	580	637	679	658
200				.4		.1		270	456	524	571	570
190								198	360	436	483	494
180								148	284	361	410	430
170								117	226	301	350	375
160								99.2	185	253	301	327
150								87.6	156	214	258	284
140								80.1	136	186	224	246
130								74.2	124	167	198	218
120								61.7	114	151	182	202
110								2.9	43.0	56.1	84.2	88.1

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	25	25	24	26	25	21	14	24	27	27	27	27
HMIN	108	109	109	109	109	110	199	242	249	266	272	274
NMAX	2537	2535	2433	2272	2110	1927	1909	1705	1573	1565	1522	1514
HMAX	357	363	368	374	374	377	375	383	406	405	399	394
SHMAX	2861	2921	2891	2778	2574	2312	1751	1480	1420	1257	1146	1087
SHINF	10017	10071	9754	9186	8525	7747	7135	6289	5857	5671	5440	5358
KM												
950	217	223	220	211	195	181	178	165	171	170	161	155
900	278	286	282	270	250	232	229	212	220	218	206	199
850	356	367	361	346	321	298	293	272	282	280	264	255
800	456	469	462	443	411	381	375	348	360	358	337	326
750	583	600	591	567	525	487	480	444	459	457	430	417
700	744	765	754	722	669	621	611	565	584	580	547	530
650	945	971	956	916	848	787	774	716	736	732	691	669
600	1192	1224	1203	1152	1067	988	973	898	918	913	863	837
550	1487	1524	1496	1429	1324	1224	1206	1111	1123	1117	1059	1029
540	1551	1589	1559	1488	1379	1275	1257	1156	1166	1159	1100	1069
530	1617	1655	1623	1549	1435	1326	1307	1202	1208	1202	1141	1109
520	1684	1723	1689	1610	1492	1378	1359	1248	1250	1244	1182	1150
510	1751	1791	1754	1672	1549	1430	1410	1294	1291	1285	1223	1190
500	1820	1860	1820	1734	1607	1482	1462	1340	1332	1326	1263	1229
490	1889	1929	1887	1795	1664	1534	1514	1386	1371	1364	1301	1268
480	1958	1998	1952	1856	1720	1585	1564	1430	1407	1402	1338	1305
470	2026	2066	2017	1916	1775	1634	1614	1473	1442	1436	1373	1341
460	2093	2132	2080	1973	1829	1682	1662	1514	1473	1467	1406	1374
450	2159	2197	2140	2028	1880	1728	1707	1553	1501	1495	1435	1404
440	2222	2258	2197	2080	1927	1770	1750	1589	1524	1518	1460	1430
430	2282	2316	2251	2127	1971	1808	1789	1621	1541	1536	1480	1450
420	2338	2369	2299	2169	2010	1842	1823	1648	1552	1547	1495	1465
410	2389	2416	2341	2205	2044	1870	1852	1669	1553	1548	1502	1473
400	2434	2457	2376	2234	2071	1892	1875	1684	1543	1535	1499	1471
390	2471	2490	2403	2254	2089	1907	1891	1691	1520	1505	1483	1457
380	2500	2513	2420	2264	2099	1912	1896	1686	1480	1453	1447	1428
370	2518	2525	2425	2262	2096	1907	1889	1668	1424	1380	1388	1380
360	2524	2521	2412	2241	2079	1888	1861	1631	1349	1285	1305	1312
350	2513	2497	2377	2200	2042	1851	1812	1573	1257	1171	1198	1220
340	2477	2443	2317	2134	1985	1794	1743	1492	1149	1033	1065	1100
330	2413	2359	2229	2043	1908	1718	1651	1391	1021	882	905	964
320	2317	2247	2117	1931	1810	1623	1539	1272	880	716	725	804
310	2193	2106	1980	1801	1694	1516	1405	1132	732	543	539	626
300	2042	1946	1823	1658	1565	1400	1250	976	581	380	360	438
290	1867	1770	1655	1503	1429	1273	1091	804	429	238	211	266
280	1679	1584	1483	1345	1287	1147	911	618	296	132	93.0	130
270	1489	1399	1311	1196	1140	1017	717	438	187	67.6	38.6	42.4
260	1303	1226	1145	1045	1002	889	521	268	103	31.6	18.1	11.2
250	1127	1067	996	915	875	771	333	139	45.3	15.4	8.4	2.7
240	972	928	870	800	763	663	182	46.6	16.5	8.4	3.9	
230	838	809	762	705	667	570	120	14.0	2.7	4.4	2.0	
220	728	711	676	626	586	488	83.6		.6	1.9	.2	
210	638	628	603	559	516	417	62.2					
200	564	557	539	500	453	352	47.9					
190	501	495	480	446	395	297	37.8					
180	444	439	425	394	341	249	30.9					
170	393	388	375	346	295	208	26.2					
160	347	344	330	303	254	176	23.1					
150	306	303	290	264	221	151	21.2					
140	267	265	254	232	193	134	20.0					
130	238	236	226	207	173	124	18.9					
120	219	216	208	192	161	117	13.5					
110	92.7	80.9	83.9	77.1	53.1	35.6	.8					

AVERAGE ELECTRON DENSITY — KP ABOVE 4.5

PUERTO RICO — 60 W — APR 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	2	2	2	2	2	1	1	1	4	4	4	4
HMIN	258	243	233	200	249	302	342	115	108	109	108	110
NMAX	1840	1636	1395	963	608	298	262	1119	1644	1989	2049	2139
HMAX	383	355	354	325	461	456	509	298	324	331	354	361
SHMAX	1395	1091	1126	696	689	265	289	759	1702	2061	2417	2557
SHINF	6585	5706	5060	3411	2402	1105	1028	3915	6339	7671	8197	8591
KM												
950	177	137	117	71.9	87.5	41.4	47.3	70.8	119	149	172	186
900	226	175	150	92.1	112	53.1	60.5	90.8	153	191	220	238
850	290	224	192	118	143	67.9	77.2	117	196	245	282	305
800	372	287	246	152	182	86.6	98.1	149	252	314	362	391
750	474	367	315	194	232	110	124	191	322	402	462	500
700	604	469	402	248	292	139	154	245	412	513	590	637
650	765	596	511	315	364	173	189	313	524	653	749	809
640	802	624	535	331	379	181	196	328	550	686	786	848
630	839	654	561	347	396	189	203	344	577	719	824	889
620	879	686	588	364	412	196	210	362	605	754	863	931
610	919	718	616	381	428	204	217	379	634	790	904	975
600	961	752	645	399	445	212	224	398	665	828	946	1021
590	1004	787	674	418	461	221	231	417	696	867	990	1068
580	1049	823	706	437	478	229	237	437	729	908	1036	1116
570	1095	861	738	458	494	237	243	458	763	950	1083	1166
560	1141	899	771	479	510	245	248	480	798	994	1132	1218
550	1189	939	805	500	526	253	252	503	835	1040	1181	1271
540	1238	980	840	523	540	260	256	526	873	1087	1233	1326
530	1288	1022	875	545	554	267	259	551	912	1135	1286	1382
520	1338	1065	912	569	568	274	261	576	952	1184	1339	1439
510	1388	1108	949	593	579	280	262	602	994	1235	1393	1496
500	1438	1152	987	618	589	286	262	629	1036	1287	1449	1554
490	1487	1197	1025	643	598	290	259	657	1079	1340	1505	1612
480	1536	1241	1063	668	603	294	254	685	1122	1394	1560	1670
470	1583	1285	1100	693	607	297	247	714	1166	1448	1616	1727
460	1628	1329	1138	719	607	298	238	743	1211	1502	1670	1784
450	1671	1372	1174	744	602	297	227	773	1255	1556	1724	1839
440	1711	1414	1210	769	590	292	216	804	1299	1610	1777	1892
430	1746	1454	1244	793	573	283	200	834	1343	1662	1826	1941
420	1777	1491	1275	816	548	268	183	865	1386	1714	1873	1987
410	1802	1526	1305	839	519	250	164	895	1427	1763	1916	2029
400	1821	1557	1331	860	485	229	143	925	1466	1809	1954	2065
390	1831	1583	1353	879	448	207	123	954	1502	1852	1987	2094
380	1828	1605	1371	896	403	182	99.6	982	1536	1891	2013	2116
370	1808	1621	1384	910	357	156	79.7	1009	1565	1925	2032	2129
360	1763	1627	1390	922	304	130	60.0	1034	1591	1952	2042	2130
350	1691	1616	1386	926	246	104	35.5	1057	1610	1972	2039	2117
340	1594	1586	1369	921	205	81.8		1077	1624	1985	2021	2084
330	1462	1524	1335	906	170	61.9		1093	1628	1987	1984	2026
320	1300	1427	1287	879	147	46.9		1106	1623	1971	1924	1949
310	1100	1289	1218	843	130	24.7		1115	1604	1932	1845	1845
300	867	1128	1123	800	111			1119	1572	1866	1743	1730
290	622	925	996	746	94.5			1111	1522	1776	1622	1596
280	378	704	862	687	88.0			1077	1459	1667	1489	1459
270	192	497	676	615	81.5			1017	1374	1535	1349	1317
260	63.5	304	496	544	75.0			928	1269	1381	1201	1167
250		181	346	469	68.5			807	1147	1216	1060	1027
240		80.5	223	387	61.0			643	1012	1041	924	893
230		24.8	89.5	313	51.5			446	877	881	808	776
220			13.1	238	39.4			298	735	732	705	679
210				145	24.8			198	603	609	617	591
200				41.9				139	485	509	543	523
190								106	390	431	474	464
180								85.5	314	366	413	411
170								76.8	252	313	358	364
160								70.6	208	267	310	318
150								67.7	176	230	269	274
140								64.9	154	201	234	239
130								62.0	138	178	209	219
120								54.8	127	163	191	198
110									66.2	74.1	111	60.2

AVERAGE ELECTRON DENSITY — KP ABOVE 4.5

PUERTO RICO — 60 W — APR 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	4	4	4	4	4	4	3	4	2	2	2	2
HMIN	111	113	109	109	109	109	149	239	273	276	256	266
NMAX	2399	2607	2532	2357	2033	2066	1917	1649	1778	2033	1901	2018
HMAX	376	376	376	375	383	374	388	393	410	411	375	398
SHMAX	2943	3167	3044	2794	2555	2405	2104	1534	1376	1587	1356	1649
SHINF	9709	10521	10185	9443	8289	8232	7513	6184	6392	7320	6717	7342
KM												
950	225	244	238	220	195	191	190	168	197	228	177	213
900	289	313	305	282	251	246	244	216	253	292	226	274
850	370	402	390	361	321	315	312	276	324	374	290	351
800	473	514	500	462	411	403	400	354	414	479	371	449
750	605	656	639	591	525	516	511	451	528	611	475	573
700	770	837	814	753	669	657	650	574	670	775	605	728
650	976	1060	1032	954	848	833	823	726	846	977	767	919
600	1227	1333	1297	1199	1064	1047	1031	908	1054	1217	964	1149
550	1520	1653	1607	1487	1316	1300	1273	1119	1289	1486	1197	1410
540	1582	1721	1673	1549	1370	1354	1325	1163	1338	1541	1247	1465
530	1646	1791	1741	1612	1425	1409	1377	1207	1386	1597	1297	1519
520	1710	1862	1810	1675	1480	1465	1429	1252	1434	1651	1348	1574
510	1775	1933	1878	1739	1535	1521	1480	1296	1482	1705	1400	1628
500	1839	2004	1947	1803	1590	1577	1532	1341	1528	1756	1452	1681
490	1903	2075	2015	1867	1644	1633	1583	1383	1572	1806	1504	1733
480	1967	2144	2082	1929	1697	1688	1632	1425	1614	1853	1555	1783
470	2028	2212	2148	1991	1749	1743	1680	1465	1653	1896	1605	1829
460	2087	2278	2211	2050	1799	1795	1725	1502	1687	1935	1653	1872
450	2144	2340	2271	2106	1846	1845	1768	1537	1718	1968	1699	1911
440	2197	2399	2328	2159	1889	1892	1806	1567	1743	1995	1743	1945
430	2245	2452	2379	2207	1927	1935	1839	1593	1762	2015	1782	1973
420	2287	2500	2424	2250	1961	1974	1868	1615	1774	2026	1818	1993
410	2322	2540	2462	2287	1988	2006	1889	1629	1778	2022	1848	2005
400	2349	2571	2492	2315	2008	2033	1903	1635	1763	1996	1872	2004
390	2365	2592	2511	2335	2019	2051	1907	1632	1720	1943	1889	1986
380	2370	2602	2517	2344	2020	2061	1901	1619	1648	1858	1898	1952
370	2361	2595	2507	2335	2006	2057	1880	1589	1548	1745	1892	1893
360	2339	2566	2476	2305	1978	2035	1842	1540	1419	1601	1859	1809
350	2292	2512	2418	2250	1931	1989	1783	1473	1265	1433	1789	1696
340	2220	2431	2337	2169	1865	1923	1707	1387	1089	1224	1691	1552
330	2120	2326	2227	2069	1781	1839	1612	1290	881	973	1558	1377
320	2003	2194	2091	1940	1680	1739	1505	1172	664	704	1392	1152
310	1871	2043	1943	1792	1565	1624	1375	1037	418	459	1193	875
300	1722	1873	1779	1639	1443	1492	1237	893	230	258	942	585
290	1562	1691	1601	1475	1309	1355	1088	734	112	112	653	329
280	1397	1504	1424	1308	1168	1214	945	563	42.7	41.9	394	134
270	1242	1320	1249	1161	1033	1071	796	385	6.2	10.8	185	41.9
260	1099	1144	1087	1018	911	927	652	222			48.6	15.4
250	960	992	944	890	795	797	507	82.2			6.2	
240	845	864	822	781	700	679	371	26.3				
230	753	759	724	692	619	580	265	13.2				
220	668	668	646	619	548	498	209	3.1				
210	600	599	581	553	488	424	165					
200	538	538	523	495	433	358	133					
190	483	483	471	439	381	305	107					
180	431	430	421	387	330	257	87.6					
170	382	384	374	342	282	217	73.6					
160	339	343	329	299	241	186	63.7					
150	295	304	292	264	205	160	56.6					
140	252	266	260	234	178	141	52.6					
130	227	240	231	209	163	129	48.4					
120	210	217	214	193	154	120	43.4					
110	41.8	22.4	70.6	62.2	87.7	31.2	8.2					

TABLES OF IONOSPHERIC DATA

FEORUARY 1959 - JUNE 1952

Table 1

Anchorage, Alaska (61.2°N, 149.9°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.45)					3.2	(2.50)
01		(3.7)					3.8	(2.40)
02		(4.0)					3.3	(2.42)
03		(3.8)					2.8	(2.45)
04		(4.65)						(2.40)
05		(4.8)						(2.38)
06		(4.6)						(2.55)
07		(4.7)						(2.65)
08		6.0			---	----		3.00
09		(6.85)			115	2.30		3.00
10		7.9			121	2.70		2.95
11		9.15		---	121	2.85		3.00
12		10.25		---	121	2.90		3.00
13		11.4			121	2.82		2.95
14		11.4			121	2.70		2.95
15		11.5			125	2.55		2.95
16		11.45			127	2.40		3.00
17		11.25			---	----		3.05
18		9.2						3.02
19		6.8						3.00
20		(5.1)						2.88
21		(4.3)						(2.95)
22		(3.9)						(2.80)
23		(3.5)						(2.75)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Adak, Alaska (51.9°N, 176.6°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.4	<325					2.45
01		3.3	<335					2.45
02		3.2	(340)					2.32
03		3.25	340					2.38
04		3.3	350					2.35
05		3.25	<350					2.35
06		3.45	325					2.45
07		5.0	250		(122)	1.70		2.85
08		8.3	230		111	2.35		3.20
09		10.35	230		111	2.80		3.15
10	---	12.25	220	---	111	3.05		3.10
11	---	13.35	220	---	111	3.20		3.05
12	---	13.2	220	---	111	3.25		3.05
13	---	12.8	225		111	3.20		3.00
14		12.6	230		111	3.00		3.00
15		12.5	225		115	2.70		3.05
16		11.5	220		121	2.30		3.05
17		10.5	220		<141	1.82		3.05
18		9.1	220					3.05
19		6.7	210					3.08
20		4.65	220					3.02
21		4.2	240					2.90
22		3.95	270					2.70
23		3.7	295					2.60

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

White Sands, New Mexico (32.3°N, 106.5°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.2	290					2.65
01		5.3	<300					2.60
02		5.0	290					2.70
03		5.1	270					2.78
04		4.7	(280)					2.60
05		4.5	<300					2.55
06		4.6	<300					2.62
07		7.0	260		(145)	2.00		2.90
08		10.5	240		113	2.80		3.12
09		12.5	235		111	3.28		3.02
10		13.4	230		109	3.60	3.7	3.00
11	---	13.8	220		(111)	3.80		2.85
12	---	13.8	225		(111)	3.80		2.80
13	---	14.0	225		113	3.90	3.9	2.75
14		13.5	225		115	3.80		2.70
15		13.2	235		115	3.50		2.70
16		12.8	240		115	3.12		2.75
17		12.5	240		119	2.50		2.80
18		11.45	230					2.85
19		10.0	225					2.85
20		8.6	235					2.90
21		7.0	230					2.90
22		6.3	250					2.80
23		5.45	270					2.75

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 4

Maui, Hawaii (20.8°N, 156.5°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.0	230					3.02
01		6.0	235					3.05
02		5.2	240					2.90
03		4.3	240				1.5	2.95
04		4.2	<240					2.80
05		3.6	<300					2.40
06		3.2	(330)					2.45
07		5.05	290		(153)	1.90		2.82
08		10.2	245		113	2.75		3.10
09		12.8	235		109	3.30		3.00
10	---	14.3	230		107	3.70		3.00
11	---	14.7	220		107	3.85		2.85
12	---	15.55	215		107	4.00		2.80
13	360	16.4	<215	---	107	4.00		2.75
14	360	16.9	220		107	3.90		2.70
15	340	16.8	225		107	3.70		2.70
16	(340)	16.3	230		109	3.45		2.70
17	---	15.55	240		(113)	2.90	3.2	2.75
18		14.9	240		<135	2.15	2.6	2.90
19		13.3	230				2.6	2.95
20		13.0	230				2.4	3.00
21		12.3	<250				1.9	3.00
22		12.2	240				1.9	3.05
23		9.2	230					3.15

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 5

Baguio, P.I. (16.4°N, 120.6°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>10.2	250					(2.75)
01		10.55	250					(2.90)
02		>10.0	240					(2.95)
03		8.25	235					2.90
04		6.2	260					2.80
05		6.0	270					2.85
06		6.0	285					2.72
07		(9.6)	280		---	----		(2.85)
00		(12.5)	260		121	3.18		(2.05)
09		(14.5)	250		119	(3.65)		(2.70)
10		(14.7)	235		119	(4.00)		(2.58)
11		(14.55)	230		119	(4.10)		(2.40)
12		(14.0)	(230)		119	(4.10)		(2.20)
13	---	>13.0	(240)		118	(4.05)		(2.15)
14		(12.95)	<245		119	(3.90)		(2.20)
15		(13.0)	<250		119	----	4.2	(2.15)
16		>11.0	255		119	(3.30)	4.0	(2.15)
17		>10.0	270		(125)	----	3.2	(2.30)
18		>10.0	310				2.2	----
19		>10.0	400					(2.15)
20		>10.0	380					----
21		>10.75	290					----
22		>10.0	250					----
23		>10.0	250					(2.82)

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 6

Thule, Greenland (76.6°N, 68.7°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.0)	260					----
01		(5.5)	265				2.0	(2.80)
02		(5.2)	260					(2.90)
03		(5.3)	260					(2.68)
04		(4.9)	260					----
05		(6.0)	250					(2.60)
06		---	250					----
07		(4.6)	250					(2.50)
08		(5.5)	240				1.7	(2.75)
09		(6.0)	250				3.5	(2.85)
10		(7.0)	250					(2.80)
11		(7.0)	250					(2.88)
12		(6.8)	235		---	----	3.2	(2.88)
13		(8.25)	230		---	----	1.9	2.90
14		(8.2)	235				1.8	(2.85)
15		(6.4)	240					(2.70)
16		(7.65)	240					(2.70)
17		8.1	245				1.7	2.65
18		(7.9)	250					(2.80)
19		(7.05)	250				1.9	(2.48)
20		(5.7)	<255				3.0	(2.70)
21		(4.75)	260				3.5	(2.68)
22		(6.0)	270				3.3	(2.55)
23		(5.25)	255					(2.60)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 7

Fairbanks, Alaska (64.9°N, 147.8°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.5)					4.0	(2.65)
01		(4.4)					4.0	(2.60)
02		(4.9)					5.0	(2.55)
03		(5.15)					4.0	(2.65)
04		(4.85)					4.4	(2.60)
05		(5.0)					3.7	(2.60)
06		(4.8)					3.0	(2.55)
07		(4.5)					2.4	(2.65)
08		(4.65)						(2.78)
09		(6.55)			---	----		(2.95)
10		8.25			---	----		3.00
11		10.0			---	----		3.00
12		11.5			121	2.40		2.98
13		11.8			(129)	2.30		2.98
14		11.9			---	----		2.95
15		11.95			---	----		2.95
16		11.2			---	----		2.90
17		9.8			---	----		3.00
18		(7.3)			---	----		(2.95)
19		(5.6)			---	----	2.9	(2.98)
20		(4.65)					2.6	(2.98)
21		(3.9)					2.2	(2.92)
22		(3.8)					3.3	(2.90)
23		(3.9)					3.5	(2.85)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 8

Anchorage, Alaska (61.2°N, 149.9°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.0)						(2.75)
01		(3.2)						(2.50)
02		(3.1)						(2.50)
03		(2.9)					2.0	(2.55)
04		(2.85)						(2.55)
05		(2.9)						(2.55)
06		(2.7)						(2.55)
07		(3.05)						(2.60)
08		(4.8)						(2.80)
09		7.0			112	1.90		3.05
10		8.9			(133)	2.30		3.10
11		10.8			120	2.45		3.05
12		12.35			121	2.52		3.05
13		13.0			<132	2.58		3.05
14		12.6			125	2.45		3.00
15		12.5			---	----		3.05
16		12.0						3.00
17		10.7						3.00
18		8.4						3.05
19		6.1			---	----		3.00
20		4.85						3.02
21		(3.8)						3.00
22		(3.3)						2.85
23		(3.2)						(2.80)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

Adak, Alaska (51.9°N, 176.6°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		2.9	<315					2.60
01		3.0	<340					2.55
02		2.95	<340					2.55
03		2.9	(315)					2.55
04		2.85	<315					2.50
05		2.85	<300					2.55
06		2.6	(305)					2.50
07		>4.05	250				1.2	2.50
00		8.0	230		(111)	2.00	2.1	3.10
09		10.9	220		(121)	2.52		3.25
10		12.95	225		119	2.75		3.15
11		13.55	225		119	2.95		3.10
12		13.2	225		<121	3.00		3.02
13		13.0	230		<121	2.98		2.95
14		12.0	230		119	2.78		3.00
15		12.0	220		129	2.30		3.00
16		11.2	220		<139	(2.05)		3.05
17		9.55	210					3.10
18		7.2	220					3.10
19		5.3	220					3.10
20		3.8	230					3.05
21		3.2	(270)					2.90
22		3.0	<280					2.80
23		3.05	<300					2.70

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 10

San Francisco, California (37.4°N, 122.2°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.8	<270					2.80
01		3.3	<285					2.80
02		3.3	<285					2.80
03		3.2	<285					2.65
04		3.0	<300					2.60
05		3.0	<315					2.60
06		2.9	<305					2.70
07		4.8	265					2.70
08		8.4	230		121	2.35		3.20
09	---	11.0	230		111	3.00		3.10
10	---	12.6	230		111	3.32		3.00
11	---	13.4	230		111	3.60		3.00
12	---	13.0	225		113	3.70		2.85
13	---	12.8	225		114	3.60		2.75
14	---	>12.4	230	---	113	3.50		2.70
15		12.0	235		115	3.15		2.75
16		11.75	230		117	2.75		2.78
17		10.9	230		(141)	2.15	2.3	2.82
18		10.2	225				2.2	2.85
19		8.7	<225					2.95
20		7.1	<225					3.00
21		5.5	<235					3.00
22		4.6	(255)					2.90
23		4.1	(260)					2.85

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

White Sands, New Mexico (32.3°N, 106.5°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.3	270					2.85
01		3.9	<275					2.82
02		3.9	<280					2.80
03		3.7	(285)					2.72
04		3.5	<300					2.65
05		3.55	(305)					2.58
06		3.5	<300					2.68
07		6.0	265		<155	----		2.95
08		9.5	240		123	2.70		3.15
09		11.2	235		113	3.20		3.10
10		12.1	230		111	3.60	3.6	2.95
11	---	13.3	235	---	113	3.80	4.0	2.85
12	---	13.0	235	---	113	3.92		2.75
13	---	12.6	230	---	115	3.90		2.70
14	---	12.2	230	---	115	3.70		2.60
15		12.1	240		115	3.45	3.5	2.65
16		11.6	245		119	3.00	3.0	2.70
17		11.0	240		(125)	2.35		2.75
18		10.2	235					2.80
19		8.7	235				2.2	2.85
20		7.4	240				2.6	2.90
21		6.4	<250					2.90
22		5.4	250					2.95
23		4.7	275					2.90

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 12

Okinawa I. (26.3°N, 127.0°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.8	230					2.95
01		9.4	230					2.90
02		7.5	235					2.95
03		6.4	225					2.85
04		5.1	220					2.80
05		4.5	285					2.55
06		4.5	310					2.60
07		6.2	275					2.05
08		11.3	240		119	(2.60)		3.15
09		13.4	235		109	3.15		3.15
10		13.6	230		109	(3.60)	3.7	3.00
11	---	14.1	220		109	(3.82)	4.3	2.80
12	---	14.8	220		109	3.98	4.2	2.65
13	360	16.0	225	---	109	4.00	4.7	2.60
14	365	16.5	225	---	109	3.90	4.3	2.55
15	(355)	16.3	230	---	109	3.75	3.8	2.55
16	(320)	16.3	240		111	3.40	3.6	2.60
17		16.0	245		(113)	2.80	3.1	2.70
18		15.6	240				2.4	2.75
19		15.1	240					2.80
20		15.5	240					2.85
21		15.5	220					2.85
22		13.1	220					2.88
23		11.25	225					2.92

Time: 135.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 13

Maui, Hawaii (20.8°N, 156.5°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	230				1.9	3.10
01		8.5	240					3.15
02		6.5	225					3.20
03		4.6	215					3.05
04		3.9	<230					2.85
05		3.4	<260					2.70
06		2.9	<300				1.9	2.60
07		5.7	300		(151)	1.70	1.8	2.75
08		11.0	250		113	2.80	3.2	3.15
09	---	13.3	235		109	3.35	3.9	3.15
10	---	13.5	<230		108	3.65	3.9	2.95
11	(360)	14.0	220	---	107	3.90	4.0	2.70
12	365	15.2	215	(6.0)	109	4.00	4.0	2.65
13	(360)	15.9	230	(7.0)	107	4.05	4.3	2.65
14	365	15.9	230	(7.6)	109	4.00	4.3	2.65
15	360	15.5	230	---	107	3.85	4.0	2.65
16	340	15.0	235	---	109	3.45	3.8	2.65
17		14.0	250		111	2.80	3.6	2.80
18		12.9	240		---	----	4.0	2.90
19		11.7	230				4.0	2.90
20		11.5	245				3.7	3.00
21		11.4	230				3.6	3.10
22		10.1	220				2.2	3.00
23		9.3	230				1.9	3.00

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 14

Baguio, P.I. (16.4°N, 120.6°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>10.5	265					(2.90)
01		(9.75)	250					(3.00)
02		8.4	250					2.90
03		6.8	270					2.78
04		6.0	280					2.80
05		5.95	280					2.80
06		5.7	280					2.75
07		(9.9)	290		<141	2.40		(2.82)
08		13.3	265		<120	(3.18)		(2.90)
09		>15.0	250		119	(3.65)		(2.85)
10		(14.3)	245		119	(3.95)	4.3	(2.50)
11		14.0	235	---	117	(4.02)	4.6	(2.15)
12	---	(12.8)	(240)	---	117	(4.10)	4.7	(2.00)
13	---	>12.0	(245)		119	(4.05)	5.7	(2.05)
14	---	>12.0	250		119	(3.95)	5.8	(2.10)
15		(12.1)	255		119	(3.70)	4.2	(2.10)
16		>11.5	265		119	3.40	4.6	(2.28)
17		>11.5	285		<123	2.60		----
18		>11.65	310				3.2	----
19		>11.2	380					(2.35)
20		>11.5	340					(2.55)
21		>11.0	275					(2.60)
22		>11.0	250					(2.70)
23		>10.5	250					(2.80)

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 15

Huancayo, Peru (12.0°S, 75.3°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(8.5)	325				3.5	(2.55)
01		(8.45)	285				3.4	(2.75)
02		8.6	260				3.5	2.85
03		8.0	240				4.0	3.00
04		6.6	225				4.0	3.15
05		5.05	230				4.0	3.20
06		7.6	275		<137	1.90	4.3	2.95
07		10.8	240		109	2.95	5.8	2.85
08		12.55	230		109	(3.58)	7.4	2.65
09		13.7	220		107	(4.00)	9.0	2.50
10	---	13.8	210		---	(4.25)	9.0	2.25
11	---	13.0	<210		---	(4.40)	9.0	2.15
12	---	12.4	200	---	---	(4.50)	9.0	2.15
13	---	11.7	200	6.6	---	(4.35)	9.0	2.10
14	(510)	12.0	200	6.2	105	(4.25)	8.9	2.15
15	(505)	12.3	200	6.0	107	(4.00)	8.2	2.12
16	---	12.5	220		107	(3.70)	8.0	2.15
17	---	12.3	250		(109)	(3.20)	7.2	2.15
18		11.8	275		(115)	2.40	5.8	2.18
19		11.35	335					2.12
20		10.1	(410)					2.00
21		9.6	(415)					(2.05)
22		(9.75)	(375)					(2.15)
23		(8.8)	360				3.0	(2.40)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 16

Narsarssuak, Greenland (61.2°N, 45.4°W) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)			125	2.50	3.2	(2.60)
01		(5.8)			120	2.72	3.1	(2.60)
02		(5.75)			115	2.70	2.7	(2.60)
03		(6.15)			113	3.00		(2.58)
04		(5.0)			111	2.80	3.3	(2.75)
05		5.4			115	3.00	3.3	2.72
06		(5.1)			118	2.15		(2.80)
07		(4.8)			---	----		2.75
08		5.1			118	2.45		2.80
09		7.6			115	2.00		2.95
10		10.3			125	2.25		3.00
11		12.15			128	2.32		3.00
12		13.2			125	2.40		3.00
13		12.75			127	2.35		3.00
14		10.8		---	131	2.20		3.02
15		(8.3)			120	1.80		(3.00)
16		(7.3)			115	2.80		(2.80)
17		(5.8)			116	2.30		2.82
18		(6.0)			122	2.50		(2.80)
19		(5.5)			115	2.80	2.9	(2.68)
20		(5.45)			117	2.55	3.4	(2.65)
21		(6.0)			115	2.50	2.6	(2.60)
22		(5.95)			124	2.30	5.6	(2.60)
23		(5.75)			122	2.30	4.3	(2.50)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 17

Ellsworth (77.7°S, 41.1°W) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	435	7.15	275	(4.2)	107	2.50	2.9	2.32
01	445	7.0	280	4.1	109	2.60	3.0	2.35
02	445	>7.0	270	4.2	105	2.70	3.0	2.30
03	480	6.9	270	4.2	105	2.80	3.0	2.30
04	470	6.6	260	4.3	105	2.90	3.0	2.25
05	500	6.7	250	4.4	101	3.00		2.25
06	520	6.4	240	4.6	101	3.18		2.25
07	510	6.2	240	4.6	99	3.30		2.30
08	520	6.3	235	4.8	99	3.38		2.30
09	560	6.0	240	5.0	99	3.40		2.25
10	560	6.1	230	5.0	99	3.50		2.25
11	590	6.3	230	5.1	99	3.50		2.30
12	555	6.3	230	5.2	100	3.50		2.35
13	540	6.5	235	5.2	101	3.45		2.40
14	500	6.5	235	5.2	101	3.40		2.45
15	500	6.65	235	5.0	101	3.40		2.48
16	470	6.8	235	5.0	101	3.30		2.50
17	430	7.0	245	4.8	103	3.20		2.55
18	430	7.2	245	4.8	103	3.00		2.55
19	455	7.3	250	4.5	105	2.95		2.50
20	435	7.2	<260	4.3	105	2.82		2.55
21	(415)	7.2	260	---	109	2.70		2.50
22	(450)	7.4	265	---	109	2.60	2.7	2.50
23	450	7.4	<280	(4.1)	107	(2.40)	3.0	2.40

Time: 45.0°W.
Sweep: 1.4 Mc to 25.0 Mc in 13.5 seconds.

Table 18

Narsarssuak, Greenland (61.2°N, 45.4°W) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.2)			125	2.25	3.4	(2.50)
01		(5.8)			123	(2.40)	2.8	(2.60)
02		(6.0)			121	2.85		(2.60)
03		(6.0)			115	2.75		(2.60)
04		(6.4)			110	2.80	3.1	(2.70)
05		(6.4)			121	2.35	3.5	2.68
06		(5.5)			---	----	2.9	(2.70)
07		5.8			---	1.82	2.1	2.80
08		7.2			122	2.10		2.95
09		10.0			122	2.20		3.00
10		11.9			123	2.42		3.00
11		13.2			125	2.45		2.95
12		14.0			123	2.60		2.95
13		14.0			123	2.50		3.00
14		13.8			125	2.40		3.00
15		12.9			131	2.18		3.00
16		10.2			123	2.10		2.95
17		8.65			127	2.22		2.85
18		(6.4)			123	2.32		(2.80)
19		(6.45)			124	(2.50)	2.5	(2.70)
20		5.9			123	2.40		2.60
21		(6.1)			123	(2.25)		(2.50)
22		(6.2)			131	(2.35)		(2.65)
23		(5.9)			130	(2.20)	3.8	(2.55)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 19

La Paz, Bolivia (16.5°S, 68.0°W) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.1)	390					(2.55)
01		(8.6)	350					(2.60)
02		(8.0)	320					(2.65)
03		(8.8)	275					(2.75)
04		8.45	230					3.00
05		7.3	220					3.15
06		8.4	255		<135	1.90		2.95
07		11.5	240		108	2.85		2.88
08		12.8	230		106	3.45	5.0	2.75
09		14.0	220		105	3.85	5.2	2.60
10		14.5	215		105	4.15	7.5	2.40
11		14.65	210		---	----	7.6	2.25
12		14.4	210	---	---	4.35	7.6	2.18
13	---	14.1	205	---	---	----	7.1	2.10
14	---	14.1	200	---	104	4.32	7.8	2.10
15	---	14.0	210		105	4.05	7.5	2.10
16	---	14.0	220		104	(3.70)	7.9	2.10
17		12.85	240		---	(3.15)	7.0	2.00
18		(12.0)	270		111	2.50	5.0	(2.05)
19		9.8	320					2.05
20		9.4	435					1.95
21		(8.7)	465					(1.95)
22		(9.0)	430					(2.10)
23		(10.0)	400					(2.30)

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 20

Ellsworth (77.7°S, 41.1°W) October 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.65)	340		145	1.60	2.6	(2.40)
01	---	(7.35)	350		135	1.85	2.7	(2.30)
02	---	(7.1)	350		129	1.70	4.0	(2.30)
03	(430)	(7.0)	330	---	121	1.90	2.8	(2.25)
04	405	(8.35)	300	(3.6)	111	2.15		(2.25)
05	480	(7.75)	270	(4.0)	111	2.50		(2.30)
06	450	8.0	250	4.4	109	2.60		2.30
07	(415)	7.2	245	(4.5)	109	2.70		2.40
08	(440)	7.15	245	4.5	105	2.95		2.50
09	(430)	7.5	240	5.0	105	3.00		2.55
10	(560)	7.95	235	4.8	105	3.00		2.55
11	---	8.3	235	---	105	3.10		2.65
12	(435)	8.4	230	---	101	3.20		2.70
13	---	9.4	235	---	105	3.00		2.80
14	---	9.35	235	---	105	3.00		2.80
15	---	9.5	235	---	105	2.90		2.85
16	---	9.85	235	---	105	2.80		2.85
17	---	10.0	240	---	109	2.60		2.85
18	---	9.95	245	---	113	2.35		2.90
19		10.1	250		121	2.05		2.85
20		10.1	265		136	2.00		2.75
21		9.7	270		<145	1.90		2.70
22	---	9.25	290		---	1.70		2.55
23		(8.0)	330		---	E		(2.40)

Time: 45.0°W.
Sweep: 1.4 Mc to 25.0 Mc in 13.5 seconds.

Table 21

Resolute Bay, Canada (74.7°N, 94.9°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		7.0	270		---	---		(2.5)
01		6.8	270		---	---	3.2	---
02		6.4	260		---	---	3.2	(2.6)
03		6.0	260		---	1.5	1.6	(2.6)
04		6.1	260		---	1.6	3.2	(2.6)
05		6.3	270		---	1.9		(2.65)
06		7.0	260		115	2.0		2.7
07	---	7.0	250	---	110	2.4		2.7
08	(420)	7.2	250	4.0	110	2.6		2.6
09	470	7.0	240	4.1	100	2.8		2.6
10	460	7.2	240	4.4	100	3.0		2.65
11	450	7.0	240	4.9	100	3.0		2.5
12	440	7.0	230	4.5	100	3.0		2.45
13	420	7.0	240	4.6	100	3.0		2.5
14	450	6.7	240	4.4	100	3.0		2.5
15	460	6.9	250	4.3	105	2.9		2.5
16	410	7.2	250	4.2	110	2.8		2.5
17	(500)	7.1	260	4.0	120	2.6		2.5
18	---	6.9	270	---	120	2.2		2.55
19		7.0	270		120	2.0		2.5
20		7.0	280		---	1.8		2.5
21		6.3	270		---	1.6		2.6
22		6.4	270		---	1.2		2.5
23		6.6	270		---	1.1		---

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 22

Baker Lake, Canada (64.3°N, 96.0°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.4	280				6.0	
01		6.3	280				5.6	---
02		6.4	270				5.3	
03		6.3	280		---	---	5.0	
04		5.4	280		---	1.3	4.5	
05		5.1	300		---	1.8	4.3	---
06	---	5.3	290	---	120	2.0	3.0	
07	---	5.9	270	3.8	120	2.4		---
08	(450)	6.0	250	4.5	115	2.8		---
09	(470)	6.2	250	4.4	110	3.2		(2.7)
10	460	6.5	240	4.8	110	3.3		(2.6)
11	460	7.0	240	5.0	110	3.5		(2.5)
12	430	7.4	240	5.0	110	3.5		2.6
13	440	7.7	240	5.0	110	3.5		2.5
14	420	8.2	240	5.1	115	3.3		(2.6)
15	440	8.2	250	5.0	110	3.3		---
16	(480)	8.0	250	4.7	120	3.0		---
17	(540)	8.0	270	4.2	120	2.8		---
18	---	7.7	270	---	120	2.3		---
19	---	7.0	290	---	130	2.0	3.4	
20		6.8	290		135	1.8	6.4	
21		6.4	270		---	1.5	6.0	
22		6.3	280				6.0	
23		6.4	290				6.0	

Time: 90.0°W.
Sweep: 1.0 Mc to 16.0 Mc in 16 seconds.

Table 23

Slough, England (51.5°N, 0.6°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	295				1.4	2.45
01		6.5	290				<1.4	2.40
02		6.4	300				<1.4	2.40
03		5.9	295				<1.4	2.40
04		5.7	<290				<1.4	2.45
05	---	5.4	260	---	---	<1.40	1.6	2.65
06	---	6.7	250	---	125	2.05	2.2	2.90
07	---	7.6	240	---	110	2.70	2.8	2.95
08	---	8.4	235	---	105	3.10	3.2	2.90
09	---	9.2	225	---	105	>3.40	3.6	2.80
10	435	9.8	220	---	105	3.65	3.8	2.70
11	420	10.3	210	5.6	100	3.80	4.0	2.65
12	440	10.6	220	6.0	100	3.85	4.1	2.60
13	---	10.6	230	---	100	3.70	3.8	2.60
14	385	10.6	230	6.1	100	3.70		2.65
15	---	10.5	240	---	105	3.45		2.65
16	---	10.7	240	---	105	3.20		2.65
17		10.4	250		110	2.70	3.0	2.75
18		10.5	250		---	>2.15	2.6	2.80
19		9.7	245			(1.65)	2.4	2.75
20		8.3	245				2.8	2.70
21		8.0	<250				2.6	2.55
22		7.4	<260				2.4	2.50
23		6.9	<270				2.1	2.45

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 24

Winnipeg, Canada (49.9°N, 97.4°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.4	270					2.8
01		5.2	300					2.75
02		4.9	300					2.7
03		4.4	310					(2.6)
04		4.4	300				1.9	(2.7)
05		4.4	300					(2.8)
06		5.0	290		---	1.7	1.8	2.9
07		6.4	250		110	2.4		3.1
08	---	7.5	230	---	100	3.0		3.0
09	---	8.1	220	---	100	3.2		2.9
10	(460)	8.3	210	5.0	100	3.6		2.85
11	460	8.4	210	5.2	100	3.8		2.65
12	490	8.9	220	5.4	100	3.8		2.7
13	470	8.7	220	5.6	100	3.8		2.6
14	460	8.9	220	5.4	100	3.8		2.6
15	(480)	8.9	230	5.0	100	3.5		2.65
16	(460)	9.2	230	4.8	100	3.2		2.7
17	---	9.4	240	---	105	2.9		(2.75)
18	---	9.2	250		110	2.4		2.8
19		9.1	250		---	---		---
20		8.6	240					---
21		7.8	240					---
22		7.0	260					(2.8)
23		6.2	260					2.8

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 25

Schwarzenburg, Switzerland (46.8°N, 7.3°E) September 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	7.3						2.9
01	300	7.1						2.9
02	300	6.8						2.9
03	300	6.6						3.0
04	290	6.3						3.0
05	260	6.1						3.0
06	250	6.2			---	---		3.2
07	220	7.6			100	2.4		3.4
08	230	8.9	210	5.0	100	2.9	3.7	3.35
09	240	9.4	210	5.5	100	3.3	4.2	3.3
10	250	10.8	210	6.0	100	3.5	4.4	3.2
11	290	10.8	210	6.6	100	3.7	5.0	3.1
12	300	11.2	210	6.8	100	3.8	5.2	3.0
13	340	11.0	210	6.8	100	3.7	4.6	3.0
14	340	10.8	210	6.8	100	3.6	4.6	3.0
15	320	10.4	210	6.5	100	3.5	4.4	3.0
16	300	9.5	220	6.0	100	3.5		3.0
17	240	9.2	230	5.2	100	3.0	3.6	3.0
18	240	9.1			100	2.5	3.2	(3.1)
19	250	8.9			---	---	2.8	(3.2)
20	240	9.0					3.6	3.1
21	240	8.4						3.1
22	260	8.0						3.0
23	290	7.7						2.9

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 26

Ottawa, Canada (45.4°N, 75.9°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.8	300					---
01		6.3	300					
02		5.8	300					---
03		5.6	300					
04		5.2	300					---
05		5.0	300		---	---		
06		6.0	270		110	2.0		---
07		7.6	240		110	2.8		3.0
08	---	9.0	230	---	110	3.3		(2.9)
09	(480)	9.0	230	5.2	110	3.7		(2.85)
10	500	9.7	220	5.6	110	3.9		---
11	410	10.0	220	5.8	110	3.9		(2.5)
12	530	10.3	220	5.9	110	4.0		(2.7)
13	450	10.2	230	6.4	110	3.9		(2.5)
14	(500)	10.2	230	6.0	110	3.8		(2.65)
15	(460)	10.2	240	5.6	110	3.6		---
16	---	10.2	250	5.2	110	3.3		---
17	---	10.2	250	---	110	2.8		---
18		10.0	260		110	2.0		---
19		9.4	250					---
20		8.8	260					---
21		8.2	270					---
22		7.4	270					---
23		7.0	290					---

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 27

Tortosa, Spain (40.8°N, 0.5°E) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.4	290				2.3	2.38
01		8.2	300				2.2	(2.45)
02		8.1	290				2.0	2.58
03		7.6	285				2.1	2.53
04		7.0	(280)				1.9	2.55
05		6.6	255		---	----	2.0	2.62
06	---	8.2	240	---	130	2.00	2.6	2.88
07	---	9.8	240	---	105	2.80	3.2	3.05
08	---	10.5	230	---	100	3.25	3.7	2.94
09	---	11.3	(225)	---	100	3.60	4.1	2.84
10	(355)	11.4	<225	6.7	100	3.80	4.2	2.74
11	360	11.7	230	7.3	100	3.90	4.4	2.61
12	385	11.8	<220	7.5	100	3.90	4.2	2.60
13	370	11.8	230	7.4	100	3.90	4.1	2.60
14	360	11.7	230	7.0	100	3.85	3.9	2.62
15	(360)	11.8	240	6.5	100	3.60	3.8	(2.58)
16	---	11.5	<250	---	105	3.20	3.7	(2.64)
17	---	11.0	250		<115	2.50	3.1	----
18		>10.0	255		---	----	2.8	----
19		9.7	250				2.4	(2.82)
20		9.1	260				2.6	(2.74)
21		8.8	(280)				2.6	----
22		8.6	285				2.3	(2.44)
23		8.5	285				2.4	(2.33)

Time: Local.

Table 28

Bunia, Belgian Congo (1.5°N, 30.2°E) September 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	10.8						2.63
01	240	(10.6)					1.5	(2.71)
02	230	10.2					2.0	2.81
03	230	8.8					2.0	3.04
04	260	8.1	---	---	---	---	3.0	2.85
05	270	11.0	250	---	120	2.9	3.8	2.83
06	(265)	13.0	245	---	115	3.5	4.4	2.61
07	---	13.8	235	---	115	3.8	4.6	2.41
08	(450)	14.5	230	---	110	4.0	4.0	2.23
09	(475)	>14.5	230	---	110	4.1		2.13
10	500	15.0	250	---	110	4.2		2.04
11	(480)	>14.5	245	6.8	110	---		<1.99
12	520	>14.0	245	6.6	110	4.0		1.94
13	520	14.2	250	6.2	120	3.7		1.93
14	530	>14.3	255	---	120	3.5		1.97
15	520	14.2	270	---	125	3.0		1.94
16	---	(13.7)	320	---	---	---	2.6	1.90
17	430	----						----
18	370	----						----
19	290	----						----
20	260	----					1.6	----
21	240	----					1.9	----
22	240	----						----
23	260	(11.4)					1.6	(2.52)

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 29

Elisabethville, Belgian Congo (11.6°S, 27.5°E) September 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	7.4						2.54
01	260	6.7						2.56
02	260	6.4					1.6	2.70
03	245	5.7					1.7	2.84
04	260	6.4					1.5	2.80
05	250	10.3	250	---	120	2.7		2.93
06	260	11.5	240	---	115	3.4		2.80
07	265	12.2	230	---	110	3.9		2.61
08	310	12.4	230	---	110	4.0		2.52
09	345	12.4	250	---	110	4.2		2.36
10	390	12.3	245	---	110	4.2		2.29
11	410	12.7	250	6.6	110	4.0	4.8	2.23
12	420	12.6	250	6.2	110	4.0		2.21
13	405	12.8	250	6.2	110	3.8	4.0	2.20
14	390	13.0	250	---	115	3.5	3.7	2.22
15	350	13.0	260	---	120	3.0	3.5	2.26
16	300	13.2	290	---	---	---	2.7	2.37
17	295	13.2					3.0	(2.49)
18	275	(13.6)					2.6	<2.57
19	250	>14.1					2.0	(2.58)
20	235	13.8					2.0	<2.64
21	230	12.0						2.62
22	225	11.8						2.69
23	220	9.1						2.64

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 30

Christchurch, New Zealand (43.6°S, 172.8°E) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.6	300				<1.7	2.60
01		(7.3)	290				<1.7	2.65
02		7.0	270				<1.5	2.60
03		6.7	270				<1.4	2.60
04		6.2	270				<1.4	2.60
05		5.8	280				<1.2	2.60
06		5.8	290		---	(1.7)		2.65
07	---	7.9	250	---	120	2.3		2.90
00	---	8.4	250	---	105	2.8		2.90
09	---	11.4	250	---	105	3.3		2.90
10	(500)	12.4	240	---	105	3.6		2.85
11	---	12.4	230	---	105	3.8		2.85
12	(500)	12.2	230	---	105	4.0		2.75
13	---	11.8	230	---	105	3.9		2.70
14	---	11.4	240	---	105	3.9		2.70
15	---	11.0	240	---	105	3.6		2.70
16	---	10.6	250	---	110	3.2		2.65
17	---	----	250	---	---	2.8		----
18		(8.3)	250		---	---	<2.3	----
19		(8.6)	250				<2.2	----
20		(8.6)	260				<2.2	(2.70)
21		8.3	270				<1.8	2.70
22		(7.9)	280				<1.8	(2.60)
23		(8.0)	300				<2.0	2.60

Time: 180.0°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 31

Cape Hallett (72.3°S, 170.3°E) — September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.0)	290		---	1.1		(2.40)
01		(5.1)	300		---	1.2		(2.50)
02		(4.5)	310		227	1.4		(2.45)
03		(4.6)	315		161	1.5		(2.50)
04		(5.1)	350		155	(1.6)	1.7	(2.45)
05		(5.4)	310		129	(1.6)	<1.8	(2.55)
06	---	(6.1)	270	---	117	(1.8)		(2.85)
07	---	(7.6)	275	---	112	2.2		(2.75)
08	---	(9.2)	250	---	111	2.5		2.80
09	---	(10.0)	250	---	113	2.8		(2.70)
10	---	9.4	255	---	111	2.9		2.85
11	---	(9.6)	240	---	111	2.9		(2.85)
12	---	9.6	240	---	111	2.9		2.80
13	(400)	10.2	250	---	111	2.8		2.80
14	---	10.4	250	---	111	2.7		2.70
15	---	10.3	255	---	111	2.6	3.3	2.70
16	---	10.4	260	---	112	2.3	<2.5	2.65
17	---	10.8	260	---	116	1.9		2.65
18		(10.3)	255		157	1.4		(2.60)
19		(10.3)	260		---	E		(2.60)
20		(9.1)	270		---	E		(2.50)
21		(9.8)	260		---	E		(2.60)
22		(7.2)	265		---	E		(2.50)
23		(6.1)	280		---	1.1		(2.40)

Time: 165.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 32

Resolute Bay, Canada (74.7°N, 94.9°W) — August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.2	280		110	1.8		2.6
01		6.0	280		115	1.8		(2.6)
02		6.0	280		130	1.9		(2.65)
03		6.0	270		110	2.1		2.7
04	---	6.0	270	---	110	2.3		2.7
05	---	6.0	260	---	110	2.5		2.7
06	400	6.0	250	4.1	110	2.8		2.5
07	460	6.0	240	4.4	100	2.9		2.55
08	470	6.0	230	4.5	100	3.0		2.5
09	450	6.0	230	4.8	100	3.1		2.5
10	490	6.2	230	4.7	100	3.3		2.5
11	500	6.2	220	4.9	100	3.4		2.5
12	500	6.0	220	4.8	100	3.4		(2.4)
13	500	6.0	210	4.9	100	3.4		2.4
14	510	6.0	210	4.8	100	3.3		2.4
15	510	6.0	230	4.8	100	3.2		2.4
16	480	6.0	230	4.6	100	3.1		2.5
17	480	6.1	230	4.5	100	3.0		(2.5)
18	420	6.0	240	4.4	100	2.9		2.5
19	(400)	6.0	260	4.3	110	2.7		2.5
20	---	6.2	260	---	110	2.5		2.5
21		6.0	280		110	2.2		2.6
22		6.2	280		120	2.0	3.3	2.6
23		6.1	280		130	1.9		2.6

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 33

Tromso, Norway (69.7°N, 19.0°E) — August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.7	(380)				4.3	(2.35)
01	---	(5.3)	(350)		---	----	4.2	(2.40)
02	---	5.4	(350)		---	----	4.0	(2.40)
03	---	5.4	(320)	----	---	----	4.0	2.40
04	---	5.9	(290)	----	---	2.30	4.0	2.50
05	---	5.9	260	----	110	2.70		2.55
06	---	6.2	250	----	100	2.90		2.55
07	(500)	6.5	245	4.70	100	3.10		2.50
08	(445)	7.0	245	4.90	100	3.30		2.55
09	480	7.3	240	5.20	105	3.35		2.50
10	(460)	7.3	240	5.25	100	3.50		2.50
11	(490)	7.4	230	5.20	100	3.60		2.50
12	(480)	7.4	225	5.45	100	3.50		2.40
13	(450)	7.3	230	5.35	100	3.60		2.55
14	(460)	7.2	235	5.25	105	3.55		2.55
15	---	7.2	245	----	105	3.40		2.55
16	---	7.0	250	----	105	3.20		2.55
17	---	7.0	250		105	3.10		2.70
18	---	6.8	255		105	----	3.2	2.70
19	---	6.8	280		105	2.60	3.1	2.70
20	(295)	6.6	310		105	----	3.1	2.60
21	---	(6.1)	330		---	----	3.8	(2.50)
22	---	(5.9)	350		---	----	4.3	(2.45)
23		5.4	(350)		---	----	4.0	2.40

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 34

Kiruna, Sweden (67.0°N, 20.3°E) — August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.6	365				4.0	2.4
01		5.6	370				4.5	2.4
02		5.5	390				3.6	2.4
03	---	5.2	340	---	---	---	4.0	2.4
04	---	5.8	285	---	---	2.0	3.4	2.55
05	(475)	6.0	260	4.0	110	2.2	3.0	2.5
06	(475)	6.3	250	4.3	105	2.6		2.5
07	415	6.4	245	4.7	105	3.0		2.6
08	420	7.0	245	5.0	105	3.1		2.6
09	460	7.0	240	5.3	105	3.2	3.8	2.5
10	425	7.3	230	5.3	105	3.2	3.5	2.5
11	475	7.2	230	5.3	105	3.2	3.8	2.5
12	465	7.2	230	5.5	105	3.2	3.5	2.5
13	455	7.2	225	5.5	105	3.2		2.5
14	440	7.2	230	5.4	105	3.1		2.6
15	(445)	7.1	230	5.0	105	3.0		2.6
16	410	7.0	240	5.0	105	3.0		2.6
17	---	7.0	250	---	105	2.8		2.65
18		7.0	260	---	110	2.6	2.8	2.6
19		6.8	275		110	2.2	2.4	2.6
20		6.6	300		115	1.9	2.2	2.6
21		6.4	315		---	---	3.0	2.6
22		6.0	340		---	---	3.0	2.4
23		5.9	375				3.5	2.4

Time: 15.0°E.
Sweep: 0.8 Mc to 14.0 Mc in 30 seconds.

Table 35

Sodankyla, Finland (67.4°N, 26.6°E) — August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.6	375		---	----	4.4	2.50
01		5.6	370		---	----	4.0	2.45
02		5.6	370		---	----	4.0	2.40
03		5.5	370		---	----	4.0	2.40
04		5.6	325		---	----	4.4	2.45
05		5.7	280		130	2.20	4.4	2.50
06		6.1	250		100	2.65	4.5	2.50
07		6.3	250	---	105	2.95	5.0	2.55
08		6.8	240	---	110	3.15	5.3	2.55
09		7.1	230	---	110	3.30	5.2	2.50
10		7.4	225	---	105	3.45	5.4	2.55
11		7.6	220	---	105	3.55	5.3	2.60
12		7.5	220	---	100	3.60	5.4	2.60
13		7.4	220	---	105	3.60	5.4	2.60
14		7.4	220	---	110	3.60	5.6	2.60
15		7.4	225		110	3.45	5.4	2.60
16		7.2	240		110	3.30	5.4	2.60
17		7.2	240		110	3.10	5.2	2.70
10		7.3	250		110	2.80	4.6	2.75
19		7.1	260		120	2.45	4.2	2.80
20		7.0	260		130	2.10	3.9	2.80
21		6.8	285		---	----	3.8	2.70
22		6.3	305		---	----	3.6	2.60
23		5.9	330		---	----	3.5	2.55

Time: 30.0°E.
Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 36

Lulea, Sweden (65.6°N, 22.1°E) — August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.8)	335		---	---	2.8	<2.4
01		(5.7)	355		---	---	3.1	(2.3)
02		(5.5)	350		---	---	2.8	<2.4
03	---	(5.4)	330	---	---	1.9	2.4	(2.4)
04	---	5.5	285	---	140	2.2	<2.4	2.5
05	---	6.0	260	4.2	130	2.5		2.5
06	(480)	6.5	250	4.5	120	2.9		2.5
07	(460)	6.8	245	4.8	120	3.2		2.5
00	415	7.1	250	5.0	120	3.3		2.5
09	450	7.4	240	5.3	110	(3.4)	<3.9	2.5
10	450	7.7	235	5.5	110	(3.3)	(3.9)	2.5
11	440	7.6	230	5.5	110	---	(3.7)	2.5
12	455	7.7	235	5.6	110	3.6		2.5
13	435	7.6	230	5.5	110	3.7		2.55
14	440	7.5	240	5.5	110	3.5		2.6
15	---	7.4	230	5.3	120	3.3		2.6
16	---	7.4	250	---	120	3.2		2.6
17	---	7.4	250	---	120	2.8	3.1	2.7
18		7.4	260		130	2.6	2.8	2.7
19		7.2	270		130	2.2	2.5	2.6
20		6.9	280		130	1.9		2.6
21		6.4	290		---	1.7		2.5
22		>6.0	315		---	---	<1.8	<2.45
23		(5.9)	325		---	---	<2.4	(2.4)

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 37

Oslo, Norway (60.0°N, 11.1°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	310				1.4	2.40
01		6.1	310				1.4	2.40
02		5.7	320				2.2	2.45
03		5.1	330				1.4	2.40
04		5.5	315		---	----	2.9	2.55
05	---	5.6	290	----	110	2.20	2.5	2.55
06	---	6.0	260	----	110	2.50	2.9	2.65
07	(470)	6.6	250	4.50	110	2.95	3.2	2.55
08	---	7.0	250	----	110	3.25	3.5	2.60
09	(540)	7.4	240	5.05	110	3.45	4.0	2.55
10	500	7.8	240	5.40	105	3.60	4.0	2.55
11	485	7.8	240	5.40	110	3.75	4.1	2.55
12	485	7.8	235	5.45	105	3.80	4.0	2.55
13	530	7.8	235	5.65	105	3.80		2.55
14	470	7.7	240	5.60	105	3.80		2.55
15	495	7.6	240	5.20	105	3.70		2.55
16	(480)	7.7	245	5.15	110	3.45		2.55
17	---	7.9	250	----	110	3.15	3.5	2.55
18		8.1	250		115	2.75	3.4	2.70
19		8.2	270		110	2.35	3.2	2.70
20		8.1	270		---	1.80	3.1	2.70
21		7.5	280		---	----	1.6	2.70
22		6.9	290					2.45
23		6.6	300					2.45

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 38

Upsala, Sweden (59.8°N, 17.6°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.2	320				3.2	2.4
01		5.6	315				3.2	2.4
02		5.4	320				3.3	2.4
03		5.1	315		---	E	3.5	2.4
04	(430)	5.1	300	3.20	---	E	3.5	2.5
05	(390)	5.6	270	4.00	125	2.10	4.3	2.6
06	410	6.3	250	4.40	110	2.65	5.2	2.6
07	390	6.6	240	5.00	110	3.00	5.7	2.6
08	395	7.2	240	5.40	105	3.30	5.7	2.6
09	410	7.6	240	5.50	105	3.50	6.3	2.6
10	415	7.9	235	5.60	105	3.70	5.7	2.6
11	415	7.8	230	5.70	105	3.70	6.1	2.6
12	420	7.9	230	5.80	105	3.75	5.8	2.55
13	425	7.9	225	5.70	105	3.75	6.2	2.6
14	400	7.8	225	5.70	105	3.70	6.5	2.6
15	390	7.6	235	5.50	105	3.50	6.0	2.6
16	380	7.7	240	5.30	105	3.30	4.8	2.7
17	340	7.7	250	4.80	110	3.00	5.0	2.7
18	(350)	7.8	260	4.40	115	2.60	5.4	2.7
19	---	7.8	270	----	130	2.00	4.2	2.7
20		7.7	270		---	E	3.4	2.7
21		7.3	270		---	E	3.0	2.6
22		7.0	280				3.0	2.5
23		6.6	290				3.0	2.5

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 39

Winnipeg, Canada (49.9°N, 97.4°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.1	280				2.2	(2.8)
01		4.8	300				2.0	(2.7)
02		4.4	320					---
03		4.2	320				2.6	(2.6)
04		4.1	340				2.6	---
05		4.4	300		---	---	2.2	(2.8)
06	---	5.1	250	---	110	2.3		3.0
07	(600)	5.8	230	4.2	105	2.8		2.9
08	480	5.9	220	4.8	100	3.2		2.8
09	470	6.3	210	5.0	100	3.5		2.7
10	480	6.9	210	5.3	100	3.8		2.6
11	460	7.1	200	5.5	100	4.0		2.6
12	460	7.2	210	5.6	100	4.0		2.6
13	460	7.4	210	5.6	100	4.0		2.6
14	460	7.4	210	5.6	100	4.0		2.6
15	440	7.4	220	5.5	100	3.9		2.6
16	430	7.4	220	5.3	100	3.6		2.6
17	400	7.2	220	5.0	100	3.2		2.7
18	(370)	7.2	240	4.6	100	2.8		2.8
19		7.2	260		110	2.3		2.9
20		7.0	260		---	1.8		2.9
21		6.8	260					2.8
22		6.3	260					2.8
23		5.8	270					(2.8)

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 40

Schwarzenburg, Switzerland (46.8°N, 7.3°E) August 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	7.1					3.4	2.9
01	300	7.0					2.8	2.9
02	300	6.8						2.9
03	300	6.6						2.9
04	300	6.1						2.8
05	300	5.8			---	---		2.95
06	260	6.6	260	3.8	110	2.1	2.6	3.2
07	230	7.2	220	4.8	100	2.8	4.1	3.4
08	250	8.0	220	4.8	100	3.2	4.6	3.4
09	300	8.4	210	5.8	100	3.6	5.2	3.2
10	330	8.5	200	6.0	100	3.7	5.0	3.1
11	320	8.8	200	5.9	100	3.9	4.7	3.0
12	380	8.7	200	6.2	100	3.9	4.4	2.95
13	390	8.8	200	6.2	100	4.0	4.5	3.0
14	380	8.9	200	6.1	100	3.9		2.9
15	360	8.7	210	6.0	100	3.9	4.7	3.0
16	340	8.5	210	5.8	100	3.6	4.4	3.0
17	320	8.3	220	5.6	100	3.3	4.1	3.0
18	250	8.3	230	4.7	100	2.8	4.1	3.2
19	260	8.4			100	2.1	3.5	3.2
20	260	8.2			---	---	4.0	3.2
21	260	7.8					4.4	3.0
22	280	7.5					4.3	3.0
23	300	7.4					3.8	2.9

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 41

Ottawa, Canada (45.4°N, 75.9°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.0	300					
01		5.5	300					---
02		4.9	300					---
03		4.3	310					
04		4.3	300					---
05		4.6	290		120	1.8		--
06	---	5.7	270	---	110	2.6		---
07	(370)	6.2	240	4.7	110	3.0		---
08	330	6.9	220	5.0	110	3.5		
09	420	7.2	220	5.5	110	3.8		---
10	470	7.3	210	5.6	110	4.0		---
11	470	7.2	220	5.8	110	4.0		G
12	480	7.6	220	5.8	110	4.0		---
13	490	7.5	220	5.7	110	4.0		---
14	470	7.6	220	5.8	110	4.0		---
15	460	7.6	230	5.5	110	3.9		(2.6)
16	440	7.8	230	5.3	110	3.6		(2.5)
17	390	7.5	240	5.0	110	3.2		(2.6)
18	---	7.7	260		115	2.7		(2.7)
19		7.8	280		115	2.0		2.7
20		7.7	280		---	---		(2.7)
21		7.3	280					---
22		6.9	280					---
23		6.3	290					---

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 42

Wakkanai, Japan (45.4°N, 141.7°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.4	315				4.5	2.50
01		7.3	310				3.5	2.50
02		6.8	310				3.5	2.50
03		6.5	310				3.3	2.45
04		6.5	320			----	3.1	2.45
05		7.2	280			2.00	3.0	2.60
06	(450)	8.6	260	---		2.70	4.7	2.65
07	(400)	8.9	250	---		3.25	5.6	2.70
08	(495)	8.8	250	---		3.50	5.8	2.70
09	430	9.0	240	---		3.70	6.2	2.60
10	470	8.9	230	---		3.75	5.3	2.55
11	465	8.8	225	---		3.80	5.8	2.60
12	420	8.6	240	---		3.90	5.8	2.60
13	410	8.6	240	---		3.90	5.7	2.55
14	435	8.4	245	---		3.80	5.6	2.60
15	(425)	8.0	250	---		3.65	4.8	2.60
16	---	8.3	250	---		3.40	5.6	2.65
17		8.2	265			2.85	5.0	2.70
18		8.3	285			2.20	5.5	2.70
19		8.4	290				5.0	2.65
20		(8.2)	295				6.5	(2.60)
21		8.1	300				5.9	2.55
22		(7.8)	300				5.0	(2.55)
23		7.4	305				4.4	2.50

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 43

Rome, Italy (41.8°N, 12.5°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.8	310				3.9	2.45
01		(7.8)	320				3.3	(2.45)
02		(7.4)	310				3.2	(2.45)
03		7.3	310				2.4	2.50
04		6.8	310					2.45
05		6.5	310		---	1.6		2.55
06		7.7	260		120	2.2	3.2	2.80
07		8.4	250		110	3.0	4.1	2.85
00	---	9.4	240	---	110	3.5	4.6	2.80
09	---	9.3	240	---	110	3.7	5.4	2.70
10	(370)	9.4	230	---	110	3.9	5.5	2.60
11	(430)	9.9	220	6.0	110	4.0	5.4	2.55
12	420	10.0	230	6.2	110	4.0	4.9	2.55
13	400	9.9	230	6.2	110	4.0	5.2	2.55
14	410	9.9	<240	6.1	110	4.0		2.50
15	(410)	10.0	240	(5.9)	110	3.9		2.55
16	---	9.6	240	---	110	3.6		2.65
17		9.6	250		110	3.2		2.65
10		9.3	260		120	2.6	3.8	2.70
19		9.2	270		120	2.0	3.2	2.80
20		9.0	270				3.3	2.70
21		8.4	270				3.1	2.55
22		8.2	300				4.1	2.55
23		7.0	310				3.8	2.55

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 44

Tortosa, Spain (40.8°N, 0.5°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.0	315				2.4	(2.42)
01		7.8	320				2.8	(2.45)
02		7.6	310				2.4	2.50
03		7.4	310				2.5	2.51
04		6.8	300				2.5	2.50
05	---	6.8	295	---	<140	1.65	2.5	2.61
06	---	8.2	255	---	112	2.40	3.0	2.88
07	---	8.5	(240)	---	100	3.10	3.9	2.96
00	(300)	9.0	(230)	6.0	100	3.50	4.5	2.88
09	(350)	9.2	220	6.4	100	3.00	4.5	2.67
10	<370	9.7	215	6.3	100	3.95	4.8	2.64
11	400	9.6	215	6.0	100	4.05	4.6	2.55
12	395	9.9	225	6.4	100	4.20	4.8	2.57
13	400	9.8	(230)	6.6	100	4.10	4.5	2.60
14	390	10.0	230	6.3	100	4.10	4.4	2.62
15	375	9.6	230	6.2	100	3.85	4.1	2.63
16	355	9.4	<240	6.0	100	3.60	4.1	2.66
17	(350)	9.3	<250	---	105	3.15	3.9	2.71
18		9.2	(270)		115	2.40	3.2	2.72
19		9.2	270				3.2	2.75
20		8.8	<270				2.7	(2.75)
21		8.5	(285)				2.4	(2.64)
22		8.3	<300				4.0	(2.54)
23		8.3	300				3.2	2.50

Time: Local.

Table 45

Akita, Japan (39.7°N, 140.1°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.1	310				4.1	2.55
01		7.9	310				4.0	2.60
02		7.6	305				3.0	2.55
03		7.2	310				2.5	2.50
04		7.1	330					2.50
05	---	7.7	295			----		2.60
06	340	9.2	250	---		2.60	3.0	2.80
07	320	9.7	250	(5.2)		3.15	4.5	2.75
00	350	9.7	245	(5.7)		3.55	5.6	2.70
09	350	9.6	245	6.0		3.90	6.0	2.60
10	380	9.8	250	(6.0)		4.00	6.5	2.60
11	395	10.0	250	6.3		----	6.1	2.55
12	395	10.0	245	6.4		----	5.6	2.55
13	390	9.9	245	6.2		(4.10)	4.0	2.60
14	390	9.7	245	6.1		4.00	4.9	2.60
15	380	9.4	250	5.8		3.75	4.8	2.60
16	350	9.3	250	5.5		3.50	5.0	2.70
17	(345)	9.0	255	---		2.95	5.8	2.70
18	---	9.1	280			----	5.8	2.75
19		8.6	285				5.6	2.70
20		8.4	300				6.5	2.50
21		0.4	300				6.7	2.55
22		8.3	310				5.1	2.50
23		8.2	320				4.3	2.55

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 46

Tokyo, Japan (35.7°N, 139.5°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.4	320				4.0	2.50
01		8.2	310				3.4	2.55
02		7.7	300				3.0	2.50
03		7.3	300				2.4	2.50
04		7.0	310					2.50
05	---	7.4	300					2.50
06	---	9.2	255	---		2.60	3.0	2.80
07	300	10.1	250	---		3.20	4.9	2.05
00	330	10.1	240	---		3.60	5.9	2.75
09	380	10.0	240	---		3.80	5.5	2.65
10	375	10.3	235	---		(4.00)	6.0	2.60
11	390	10.6	250	---		(4.15)	6.5	2.55
12	390	10.8	245	---		(4.20)	6.4	2.55
13	400	10.6	(250)	(6.4)		(4.20)	5.5	2.55
14	390	10.0	240	6.0		4.10	5.6	2.55
15	380	10.4	250	5.8		3.90	5.2	2.60
16	350	10.1	255	---		3.50	5.2	2.60
17	345	10.0	260			2.90	6.0	2.70
18	---	(9.8)	295				5.8	(2.70)
19		8.9	290				4.5	2.60
20		8.6	320				5.4	2.50
21		(8.6)	310				4.5	(2.45)
22		8.4	345				5.1	2.45
23		8.5	340				4.9	2.50

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 47

Yamagawa, Japan (31.2°N, 130.6°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.3)	300				3.6	(2.65)
01		9.2	290				3.6	2.65
02		0.7	270				3.4	2.70
03		8.0	280				2.9	2.70
04		7.5	295				3.1	2.70
05		7.4	290				2.8	2.65
06		8.2	250			1.85	2.8	2.90
07		10.0	240			2.80	3.6	3.10
00		10.2	230			3.40	5.0	3.05
09	---	9.9	225	---		3.80	6.4	2.05
10	(385)	10.3	220	6.7		4.00	5.9	2.65
11	365	11.1	215	6.6		4.15	5.9	2.65
12	375	11.8	215	6.9		4.30	5.7	2.60
13	380	11.6	225	6.6		4.30	5.7	2.60
14	375	12.1	225	6.6		4.20	5.4	2.60
15	370	11.9	240	6.5		4.05	5.6	2.65
16	350	12.2	250	6.3		3.80	5.8	2.70
17	330	11.7	255	6.2		3.40	6.5	2.70
10	---	11.4	275			2.60	6.0	2.80
19		10.6	275				5.0	2.80
20		9.4	280				5.1	2.65
21		9.3	295				4.1	2.60
22		9.3	300				3.3	2.60
23		9.3	300				3.8	2.60

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 48

Formosa, China (25.0°N, 121.5°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>14.8	280					2.85
01		13.6	260				2.2	2.85
02		12.0	240					2.85
03		11.0	240					2.80
04		9.7	260					2.80
05		8.6	240				2.0	2.90
06		9.7	250				2.3	2.95
07		10.2	<240				3.7	3.10
00		10.2	230			---	4.8	2.85
09		11.0	(230)	---		---	5.2	2.60
10	---	12.4	<240	---		---	5.6	2.50
11	(400)	13.5	(240)	---		---	6.2	2.55
12	400	14.2	<250	6.7		---	6.0	2.55
13	(400)	14.5	<260	---		---	5.2	2.55
14	400	15.5	<260	6.5		---	5.6	2.55
15	(380)	16.0	(240)	6.5		---	5.1	2.60
16	(360)	15.5	240	---		---	4.8	2.60
17	---	15.5	<260			---	5.9	2.70
18		15.0	<280			---	5.2	2.75
19		14.4	290				4.2	2.70
20		>14.5	300				2.0	2.55
21		>15.0	<300					2.65
22		15.0	300					(2.70)
23		15.0	280					(2.80)

Time: 120.0°E.
Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 49

Bunia, Belgian Congo (1.5°N, 30.2°E) August 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	245	(8.0)					2.5	(2.62)
01	240	----					3.0	----
02	230	8.8					2.9	2.79
03	230	7.1					3.0	2.98
04	260	6.8					2.9	2.81
05	270	11.0	255	---	120	2.7	3.6	2.80
06	290	13.9	245	---	110	3.4	4.5	2.81
07	300	13.6	240	---	110	3.9	4.4	2.67
08	350	13.8	230	---	110	4.0		2.50
09	390	14.1	225	---	110	4.0		2.37
10	440	14.0	220	---	110	4.1		2.28
11	475	13.8	230	6.6	110	4.1		2.15
12	495	13.7	240	6.6	110	4.1		2.08
13	475	13.4	245	6.1	120	4.0		2.01
14	505	13.2	250	---	120	---	4.0	2.02
15	(490)	13.2	260	---	120	2.9	3.7	<1.98
16	---	(13.3)	300	---	---	---	3.0	<2.08
17	375	(12.8)					3.0	1.98
18	380	----					1.9	----
19	300	----					1.6	
20	260	----					1.7	
21	260	----					2.0	
22	255	----					2.3	
23	240	----					2.9	----

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 50

Leopoldville, Belgian Congo (4.4°S, 15.2°E) August 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	11.7					2.0	2.73
01	220	9.5					2.0	2.61
02	230	8.2					2.7	2.64
03	240	6.1					2.4	2.73
04	240	5.0					2.7	2.84
05	270	6.4	---	---	---	---	2.8	2.80
06	260	10.1	250	---	120	2.8	3.4	2.82
07	280	11.8	240	---	115	3.5	3.5	2.76
08	290	12.4	235	---	110	3.8		2.62
09	320	12.5	240	---	110	4.0	4.4	2.50
10	360	12.6	250	---	110	4.2		2.36
11	400	12.5	250	---	110	4.3		2.26
12	440	12.3	250	6.4	110	4.2		2.14
13	450	13.0	250	6.3	110	4.1		2.11
14	450	13.6	250	6.0	110	4.0		2.11
15	440	13.9	240	---	115	3.4	3.4	2.12
16	385	13.8	260	---	120	2.7	3.8	2.16
17	285	14.6	300	---			3.2	2.33
18	300	15.9					3.0	<2.36
19	300	----					2.8	----
20	240	----					2.0	----
21	220	----						----
22	220	(16.0)						(2.53)
23	215	13.6						2.62

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 51

Elisabethville, Belgian Congo (11.6°S, 27.5°E) August 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	215	5.0						2.62
01	255	3.8						2.66
02	265	3.5						2.66
03	260	3.3					1.5	2.86
04	265	4.0						2.64
05	250	9.0	250	---	125	2.5	3.1	2.98
06	250	11.0	240	---	110	3.2		2.88
07	260	12.1	230	---	110	3.7		2.72
08	265	12.0	225	---	110	4.0		2.63
09	310	12.0	235	---	110	4.0		2.54
10	340	11.8	240	---	110	4.1		2.44
11	380	11.4	240	6.5	110	4.0		2.34
12	390	11.4	250	6.4	110	4.0	4.0	2.28
13	395	11.3	245	6.0	110	3.9	4.0	2.26
14	365	11.4	245	---	115	3.5	3.7	2.27
15	335	11.5	255	---	120	2.9	3.5	2.34
16	275	11.7	265	---	---	---	3.0	2.48
17	260	11.8					2.6	2.63
18	260	11.8					2.6	2.65
19	240	12.5					2.0	2.62
20	230	12.5					1.8	2.67
21	225	11.2						2.80
22	215	9.2						2.76
23	220	6.5						2.79

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 52

Baker Lake, Canada (64.3°N, 96.0°W) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.5	290		130	1.7	3.8	
01		5.2	300		130	1.6	4.1	
02	---	5.4	300	---	130	1.8	4.1	
03	---	5.0	290	---	110	1.9		
04	---	5.0	280	3.5	115	2.1	3.6	----
05	390	5.0	240	3.8	110	2.4	4.0	
06	500	4.9	240	4.1	110	2.8	3.0	----
07	580	5.0	220	4.4	110	3.2		G
08	750	5.0	210	4.6	110	3.4	5.2	G
09	G	5.0	220	4.7	105	3.6	5.1	G
10	590	5.3	220	4.8	105	3.8	4.4	G
11	640	5.4	220	5.0	105	3.9	5.0	G
12	550	5.8	220	5.0	105	3.9		G
13	520	6.3	210	5.0	105	3.9		(2.41)
14	470	6.4	210	5.0	105	3.7		----
15	470	6.7	210	5.0	105	3.7		(2.5)
16	460	6.0	220	4.9	110	3.5		----
17	450	6.0	220	4.8	110	3.3		----
18	420	5.9	220	4.6	110	3.2	4.8	
19	400	6.0	240	4.3	110	2.9	6.0	----
20	(420)	6.0	270	3.7	125	2.5	6.5	----
21		5.9	290		125	2.1	6.2	
22		5.6	300		---	2.0	7.0	
23		5.6	300		140	1.7	4.3	

Time: 90.0°W.
Sweep: 1.0 Mc to 16.0 Mc in 16 seconds.

Table 53

Oslo, Norway (60.0°N, 11.1°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	315		---	----	>1.3	2.40
01		6.2	315		---	----	1.5	2.50
02		5.8	325		---	1.40	1.4	2.40
03		5.7	315		---	1.50	1.8	2.40
04	---	5.6	295	----	115	2.05	2.0	2.45
05	(440)	5.6	260	3.00	110	2.40	2.6	2.55
06	(480)	5.8	250	4.40	110	2.80	2.8	2.55
07	485	6.2	240	4.60	110	3.10	3.2	2.55
00	460	6.5	240	4.95	105	3.35		2.55
09	475	6.9	235	5.15	105	3.50	3.6	2.55
10	460	6.9	235	5.40	105	3.65	3.6	2.55
11	460	6.9	220	5.40	105	3.75	4.0	2.55
12	470	7.0	225	5.45	105	3.75		2.50
13	480	7.0	230	5.50	105	3.85		2.45
14	490	7.0	230	5.40	105	3.85		2.50
15	490	6.9	230	5.40	105	3.75		2.55
16	450	7.0	240	5.30	105	3.55		2.55
17	(400)	7.3	245	5.00	105	3.35	3.4	2.55
18		6.9	250		115	3.00	3.6	2.70
19		6.9	250		110	2.65	3.2	2.70
20		6.9	270		110	2.20	2.5	2.70
21		6.8	290		---	1.80	2.0	2.60
22		6.6	300		---	----		2.55
23		6.6	300		---	----		2.50

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 54

Upsala, Sweden (59.8°N, 17.6°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.0	295		---	E	2.8	2.5
01		5.7	310		---	E	3.2	2.4
02		5.5	320		---	E	3.2	2.5
03	380	5.6	295	2.90	120	1.50	3.5	2.5
04	390	5.6	260	3.60	115	2.10	4.4	2.5
05	390	5.8	240	4.10	110	2.50	5.0	2.55
06	415	6.1	240	4.50	105	2.85	4.4	2.6
07	450	6.6	230	4.90	105	3.20	5.0	2.5
08	440	7.0	220	5.20	105	3.40	6.3	2.6
09	435	7.0	220	5.30	105	3.50	5.0	2.6
10	440	7.1	220	5.50	105	3.70	5.0	2.5
11	450	7.2	215	5.50	105	3.70	5.7	2.5
12	450	7.1	220	5.60	105	3.00	4.9	2.6
13	475	7.0	220	5.60	105	3.75	5.2	2.5
14	480	7.0	225	5.50	105	3.65	5.2	2.5
15	440	7.0	220	5.40	105	3.60	4.5	2.5
16	405	7.0	230	5.20	105	3.40	4.6	2.6
17	380	7.2	240	5.00	105	3.20	5.0	2.7
18	340	7.0	245	4.50	105	2.85	4.1	2.7
19	295	7.0	255	3.05	110	2.40	3.7	2.8
20		7.0	275		110	1.90	3.2	2.7
21		6.8	290		120	1.40	2.7	2.7
22		6.6	290		---	E	2.0	2.6
23		6.5	295		---	E	2.4	2.55

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 55

Wakkanai, Japan (45.4°N, 141.7°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.4	315				2.8	2.50
01		7.2	310				3.1	2.50
02		7.1	305				3.1	2.50
03		6.7	305			----	3.0	2.50
04	---	6.8	310	---		1.55	3.1	2.55
05	(405)	7.3	270	3.7		2.35	3.4	2.55
06	410	7.9	255	4.5		2.95	3.5	2.50
07	405	7.8	250	4.9		3.35	5.0	2.60
08	460	7.7	245	5.2		3.55	4.7	2.50
09	450	7.3	250	5.3		3.70	6.1	2.45
10	500	7.1	245	5.4		3.75	6.0	2.45
11	470	7.2	230	5.5		3.80	5.2	2.50
12	480	7.2	230	5.5		3.75	5.5	2.45
13	450	7.3	240	5.5		3.80	5.3	2.50
14	445	7.3	240	5.5		3.70	5.3	2.55
15	430	7.4	235	5.4		3.65	4.5	2.55
16	420	7.5	250	5.1		3.50	4.6	2.60
17	(355)	7.3	260	4.8		3.10	5.2	2.65
18	---	7.5	270			2.50	5.2	2.70
19		7.5	290			----	4.8	2.70
20		7.5	300				4.3	2.55
21		(7.7)	315				4.1	(2.50)
22		(7.6)	320				3.5	(2.50)
23		7.5	310				2.8	2.50

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 56

Akita, Japan (39.7°N, 140.1°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.1	310				3.4	2.55
01		7.9	325				3.3	2.55
02		7.6	300				2.4	2.60
03		7.4	300				2.6	2.55
04		7.0	300					2.55
05	380	7.6	280	---		2.20	2.5	2.60
06	350	8.4	250	4.6		2.80	3.9	2.60
07	345	8.7	250	5.0		3.40	5.2	2.70
08	370	8.5	240	5.4		3.65	6.4	2.60
09	425	8.4	(240)	5.6		3.90	6.6	2.55
10	420	8.4	245	5.7		4.00	6.4	2.50
11	405	8.5	245	5.8		(4.00)	6.2	2.55
12	410	8.6	240	5.8		4.05	6.0	2.55
13	410	8.8	250	5.8		4.10	6.2	2.60
14	400	8.7	245	5.6		4.00	5.2	2.55
15	395	8.5	250	5.6		3.90	4.9	2.65
16	390	8.5	250	5.3		3.55	5.9	2.70
17	350	8.4	250	5.0		3.10	6.7	2.70
18	320	8.4	(270)	---		2.45	6.8	2.70
19		8.3	295				5.7	2.70
20		7.9	300				6.4	2.50
21		8.2	340				4.6	2.45
22		8.5	340				5.9	2.50
23		8.5	325				4.9	2.55

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 57

Tokyo, Japan (35.7°N, 139.5°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	340				4.2	2.50
01		8.4	315				3.5	2.55
02		7.9	305				3.2	2.60
03		7.4	300				2.5	2.55
04		7.1	305				2.2	2.55
05	---	7.5	270	---		----		2.60
06	365	8.5	250	---		2.70	3.2	2.60
07	330	9.1	250	5.1		3.20	5.6	2.75
08	350	8.7	240	5.5		3.60	6.2	2.65
09	400	8.8	(250)	5.9		3.80	7.1	2.55
10	415	9.1	235	6.0		(3.95)	6.7	2.55
11	400	9.5	245	5.8		(4.05)	7.0	2.50
12	410	9.8	240	6.0		(4.15)	5.8	2.50
13	400	9.9	235	5.8		(4.10)	5.4	2.55
14	400	10.0	240	5.7		(4.05)	5.4	2.60
15	380	9.6	240	5.8		(3.90)	5.2	2.60
16	355	9.2	250	5.4		3.60	5.1	2.65
17	350	9.2	(250)	---		3.10	5.0	2.70
18	325	8.8	275			2.30	5.4	2.70
19		8.6	280				4.9	2.65
20		8.2	305				4.5	2.50
21		(8.3)	350				4.8	(2.45)
22		(8.7)	350				5.6	(2.45)
23		(8.6)	350				4.9	(2.50)

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 58

Yamagawa, Japan (31.2°N, 130.6°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.0)	305				4.1	(2.65)
01		9.2	300				3.6	2.65
02		8.0	285				3.6	2.70
03		8.2	270				3.0	2.75
04		7.3	270				3.0	2.65
05		7.1	290				2.8	2.65
06	---	7.9	250	---		2.20	2.8	2.85
07	(285)	8.9	240	---		2.90	3.8	2.95
08	(280)	8.7	230	---		3.45	4.8	2.80
09	385	8.9	230	6.1		3.75	5.4	2.65
10	375	9.5	235	6.2		4.00	6.6	2.55
11	395	9.6	230	6.3		4.10	6.7	2.60
12	390	10.5	215	6.2		4.20	6.2	2.60
13	390	10.5	230	6.2		4.20	5.9	2.65
14	360	11.0	220	6.1		4.10	5.6	2.65
15	365	11.0	230	6.1		4.00	5.6	2.65
16	350	10.9	230	6.0		3.70	4.9	2.70
17	330	10.5	245	5.6		3.40	5.2	2.75
18	300	10.0	250	5.0		2.80	5.6	2.70
19		9.4	275			1.80	4.2	2.75
20		8.9	290				4.0	2.65
21		8.8	300				4.3	2.50
22		9.0	325				3.8	2.50
23		9.0	330				4.4	2.55

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 59

Bunia, Belgian Congo (1.5°N, 30.2°E) July 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	----					2.9	----
01	250	(7.8)					3.0	(2.06)
02	240	7.3					3.0	2.90
03	240	6.6					3.0	3.02
04	280	7.0	---	---	---	---	3.0	2.83
05	280	11.0	260	---	120	2.8	4.0	2.81
06	290	13.3	245	---	110	3.3	4.5	2.87
07	310	13.8	240	---	110	3.7		2.68
08	360	14.2	240	---	110	4.0		2.52
09	400	14.2	250	---	110	4.0		2.41
10	435	14.1	250	---	115	4.0		2.26
11	490	13.4	265	6.6	115	4.0		2.16
12	535	13.2	250	6.6	120	4.0		2.06
13	540	12.0	250	6.0	115	3.9	4.0	2.07
14	520	12.8	250	---	115	3.5		2.06
15	500	13.1	260	---	120	2.9	3.7	2.14
16	---	13.3	290	---	---	---	3.0	2.23
17	330	(12.9)					3.0	2.24
18	340	----					2.0	----
19	280	----					2.0	----
20	270	----					2.2	----
21	250	----					3.0	----
22	260	----					2.6	----
23	260	----					3.0	----

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 60

Rarotonga I. (21.2°S, 159.8°W) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	250					2.75
01		6.2	250					2.80
02		5.8	240					2.85
03		4.7	240					2.85
04		4.0	250					2.60
05		4.2	270					2.70
06		5.8	250		---	---	<1.2	2.70
07		10.3	250		120	2.4		3.10
08		12.2	250		115	3.1		3.10
09		13.2	240		110	3.5		3.10
10		12.2	230		110	3.7		3.00
11	---	11.6	210		110	3.8		2.80
12	330	11.6	200		110	3.8		2.75
13	360	11.7	220	---	110	3.8	4.4	2.75
14	350	11.4	230		110	3.6	4.2	2.65
15	---	11.7	250		110	3.4	4.6	2.60
16	---	(12.0)	250		115	2.8	3.9	(2.75)
17		(12.0)	250		---	---	4.0	(2.75)
18		(10.9)	240				3.7	(2.80)
19		(9.6)	<250				3.1	(2.70)
20		(9.0)	250				2.9	(2.70)
21		(8.7)	240				2.6	2.70
22		(8.1)	240				<1.2	(2.70)
23		(7.6)	240					(2.65)

Time: 165.0°W.
Sweep: 1.5 Mc to 20.0 Mc in 5 minutes, manual operation.

Table 61

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.0	<290				<1.7	2.00
01		3.0	<305				<1.7	2.70
02		3.1	<300				<1.7	2.00
03		3.0	<270				<1.7	2.90
04		2.0	<260				<1.8	2.80
05		2.8	<295				<1.8	2.00
06		2.9	<290				<1.6	2.80
07		6.2	240			<2.1		3.20
08	---	9.3	230			2.8		3.20
09	---	>11.0	230			3.2		3.15
10	(250)	11.9	225			3.6		3.05
11	---	11.9	210			3.8		2.95
12	---	11.4	215			3.9	4.0	2.90
13	---	11.2	215			3.9		2.80
14	---	11.3	225			3.7	3.9	2.75
15	---	11.2	230			3.4	3.7	2.00
16		10.9	235			3.0		2.00
17		10.7	235			2.4		2.05
18		9.5	220			<1.8	<2.1	3.00
19		7.6	220				<1.9	3.10
20		5.8	(235)				1.9	3.10
21		>4.6	235				<1.9	(3.15)
22		3.8	<250				<1.8	3.00
23		3.2	<280				<1.7	2.85

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 62

Christchurch, New Zealand (43.6°S, 172.8°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.0	300				<1.7	2.60
01		4.6	310				<1.7	2.55
02		4.4	310				<1.7	2.55
03		4.4	300				<1.7	2.60
04		4.2	300				<1.4	2.65
05		4.1	260				<1.5	2.65
06		3.5	260				<1.7	2.70
07		3.5	260				<1.5	2.70
00		5.9	260		140	1.9		3.05
09	---	8.8	250	---	---	2.5	3.0	3.15
10	---	10.1	250	---	140	3.0	3.3	3.15
11	---	10.8	250	---	140	3.3	4.0	3.05
12	---	11.0	250	---	130	3.3	4.0	3.00
13	---	10.9	250	---	130	---	4.1	2.90
14	---	11.0	250	---	130	3.3	<3.6	3.00
15		(10.6)	250		125	3.0	3.2	2.80
16		(10.3)	250		---	2.5	2.8	(2.85)
17		(8.3)	250		---	---	<2.3	(2.90)
18		8.3	250		---	---	<2.2	2.85
19		7.5	250				(1.8)	2.80
20		6.6	260				<1.7	2.80
21		5.8	280				<1.7	2.70
22		5.3	300				<1.7	2.65
23		5.2	300				<1.7	2.60

Time: 180.0°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 63

Cape Hallett (72.3°S, 170.3°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.9)	260		---	1.1		(2.50)
01		(3.6)	295		---	1.2		(2.70)
02		(3.0)	275		---	1.2		(2.80)
03		(3.7)	200		---	1.3		(2.80)
04		(3.6)	(295)		---	1.2		(2.70)
05		(3.7)	300		---	1.2		(2.60)
06		(3.9)	290		---	1.2		(2.70)
07		(4.2)	270		---	1.4	(1.4)	(2.80)
08		(4.6)	275		120	(1.5)	1.9	(2.85)
09		(5.2)	(265)		115	1.4	(1.7)	(2.80)
10		(5.8)	255		116	1.5	<1.8	(2.90)
11		(5.6)	235		114	(1.5)	<1.9	(3.00)
12		(6.4)	240		111	1.8	2.3	(2.95)
13		(6.2)	245		113	1.6	2.9	(2.95)
14		(7.2)	250		120	1.5	3.4	(2.00)
15		(6.7)	280		---	(1.4)	4.4	(2.80)
16		(6.4)	260		---	1.2	2.4	(2.75)
17		(7.0)	(245)		---	---	2.4	(2.65)
18		(8.5)	245		---	---	2.0	(2.75)
19		(6.4)	245		---	E	2.0	(2.60)
20		(7.3)	260		---	E		(2.75)
21		(7.0)	235		---	E	<1.3	(2.80)
22		(5.5)	245		---	E		(2.60)
23		(4.6)	255		---	1.1		(2.65)

Time: 165.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 64

Tromso, Norway (69.7°N, 19.0°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.9	---		---	-----	4.0	(2.35)
01	---	5.7	(370)	----	---	-----	3.2	2.30
02	---	5.9	(310)	----	---	-----	3.8	2.40
03	---	6.4	(300)	----	105	2.10	3.2	2.40
04	---	6.8	290	----	110	2.50	2.9	2.40
05	(460)	6.7	255	4.15	110	2.70	2.9	2.40
06	(450)	6.8	250	4.55	105	2.90		2.40
07	(490)	7.1	250	4.85	105	3.15		2.40
08	500	7.2	245	5.10	105	3.30		2.40
09	515	7.3	245	5.15	105	(3.40)		2.35
10	520	7.2	240	5.15	105	3.60		2.35
11	500	7.3	240	5.30	105	3.65		2.40
12	510	7.3	240	5.30	105	3.60		2.40
13	480	7.5	230	5.30	105	3.60		2.40
14	480	7.6	240	5.30	105	3.50		2.40
15	470	7.4	245	5.05	105	3.40		2.40
16	465	7.0	250	4.80	105	3.25		2.50
17	---	7.3	255	----	105	3.10		2.55
18	---	7.0	260	----	105	2.85	3.2	(2.55)
19	---	7.0	280	----	105	2.60	3.8	(2.55)
20	(300)	6.5	300		105	2.50	3.2	(2.55)
21	---	6.4	320		120	2.50	4.4	2.55
22	---	6.4	340		---	2.20	4.0	2.50
23	---	6.0	360		---	----	4.0	2.40

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 65

Bogota, Colombia (4.5°N, 74.2°W) January 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.0	220					2.90
01		>9.0	225					3.00
02		7.6	230				2.2	2.95
03		5.8	230				2.3	2.90
04		5.55	250				2.6	2.90
05		5.8	265				2.7	2.80
06		8.0	285		---	----	2.2	2.75
07		12.2	255		119	2.70	3.8	2.90
08		14.35	240		112	3.40		2.82
09	---	14.2	225		111	3.90	4.0	2.70
10	---	14.2	215		111	4.10	4.2	2.60
11	435	14.2	210	7.3	111	4.30		2.50
12	460	14.6	205	7.2	111	4.30		2.40
13	470	14.5	(235)	6.6	111	(4.25)	4.8	2.35
14	450	14.85	240	6.6	113	(4.15)	4.6	2.40
15	440	14.05	245	(6.5)	113	3.95	4.4	2.40
16	430	13.5	250	---	113	3.60	4.4	2.45
17	---	13.1	(265)		119	2.95	4.5	2.50
18		13.2	290		---	----	3.4	2.65
19		13.2	275				3.2	(2.70)
20		13.6	270					(2.70)
21		>14.0	260					2.65
22		>14.1	240					(2.78)
23		>14.0	230					2.90

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 66

Little America (78.2°S, 162.2°W) December 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	(540)	(5.0)	260	(3.9)	101	(2.70)		(2.25)
01	(600)	(5.0)	250	(4.0)	101	(2.75)		(2.25)
02	(740)	(4.65)	250	(4.0)	101	(2.90)		(2.10)
03	(720)	(4.7)	275	(4.1)	101	(3.00)		2.00
04	(640)	5.05	260	(4.5)	101	3.12		(2.20)
05	775	5.4	260	4.6	101	3.30		2.20
06	580	5.7	250	(4.6)	101	(3.35)		2.30
07	580	(5.9)	250	(4.8)	101	(3.40)		(2.30)
00	(560)	(6.3)	245	(4.9)	101	3.50		(2.30)
09	555	(6.45)	240	(5.0)	101	3.50		(2.30)
10	580	(6.2)	235	(5.0)	99	3.55		(2.25)
11	575	(6.0)	230	(4.9)	99	(3.60)		(2.25)
12	560	(5.8)	230	(5.0)	99	3.60		(2.22)
13	580	(6.0)	230	(5.0)	99	(3.55)		(2.20)
14	630	(5.8)	235	(5.0)	99	(3.50)		(2.25)
15	(585)	(5.9)	230	(4.9)	99	(3.45)	3.8	(2.25)
16	(570)	(5.9)	240	(4.8)	99	(3.40)	3.7	(2.22)
17	(560)	(5.95)	245	(4.6)	99	(3.32)	3.8	(2.35)
18	535	(6.0)	250	(4.4)	99	(3.10)		(2.30)
19	530	(6.2)	255	(4.2)	99	(3.00)		(2.30)
20	510	(6.1)	255	(4.2)	99	(2.95)		(2.28)
21	550	(5.8)	270	(4.0)	99	(2.85)		(2.30)
22	520	(5.7)	<280	(4.0)	99	2.80		(2.30)
23	(560)	(5.45)	275	(3.9)	99	2.82		(2.32)

Time: 165.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 67

Byrd Station (80.0°S, 120.0°W) December 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	550	(5.25)	(290)	4.0	111	(3.00)		2.15
01	540	5.2	(290)	4.0	110	3.00	3.3	2.15
02	580	5.3	295	4.0	107	3.00		2.18
03	640	5.2	(275)	4.3	103	3.00	3.5	2.15
04	630	5.3	270	4.4	105	(3.05)		2.15
05	735	5.25	270	4.5	105	----		2.05
06	640	5.45	<265	4.6	105	(3.30)		2.15
07	650	5.6	260	4.8	105	(3.32)		2.18
08	640	5.75	250	4.9	<103	(3.40)		2.15
09	590	6.1	245	5.0	101	(3.40)		2.18
10	570	6.25	245	5.0	101	(3.45)		2.20
11	580	6.6	250	5.1	101	(3.50)		2.20
12	550	6.8	240	5.1	101	3.50		2.22
13	550	6.8	250	5.0	101	3.50		2.20
14	570	6.6	250	4.9	101	(3.45)		2.20
15	575	6.3	250	4.9	101	(3.50)		2.15
16	570	6.3	(260)	(4.9)	101	(3.40)		2.25
17	550	6.35	270	4.7	103	(3.40)		2.20
18	600	(6.5)	(270)	4.7	105	3.20		2.15
19	580	(5.8)	260	4.5	107	(3.00)		2.15
20	580	5.9	<300	4.5	<111	(3.00)	3.8	2.15
21	540	(6.1)	270	4.3	109	3.00		2.10
22	550	(5.9)	(285)	4.2	109	(2.90)		2.15
23	540	(5.9)	<300	4.1	109	(3.00)	4.0	2.10

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 68

Byrd Station (00.0°S, 120.0°W) November 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	550	(6.0)	(390)	3.8	129	----	3.3	(2.10)
01	600	(5.7)	(370)	3.6	127	----	3.7	(2.10)
02	685	5.3	(360)	3.8	<131	(2.62)	3.6	2.05
03	695	5.35	(350)	4.0	118	2.90	3.5	2.10
04	<640	5.6	320	4.3	(129)	2.75		2.02
05	(700)	6.2	310	4.5	122	(2.95)		2.18
06	700	6.0	320	4.5	121	3.00		2.10
07	610	6.05	<300	4.8	121	3.10		2.22
08	595	6.3	300	5.0	122	3.15		2.12
09	630	6.6	290	5.0	121	(3.20)		2.15
10	590	7.0	290	5.0	121	3.20		2.15
11	580	7.0	290	5.1	121	3.30		2.10
12	590	7.3	290	5.0	121	3.40		2.15
13	570	7.6	280	5.1	121	3.35		2.10
14	570	7.2	300	4.7	121	3.30		2.15
15	600	7.4	305	5.0	121	(3.25)		2.15
16	590	6.85	310	4.8	121	(3.20)		2.12
17	655	7.0	315	4.8	121	(3.20)		2.15
18	625	6.15	340	4.6	125	3.15	3.2	2.10
19	590	(6.6)	330	4.4	123	(2.90)		2.10
20	610	(6.6)	335	(4.4)	123	(2.70)		(2.15)
21	580	(7.0)	330	(4.2)	130	(2.60)	3.4	(2.12)
22	(600)	(5.7)	350	(4.0)	129	(2.50)	3.2	(2.05)
23	570	(6.35)	360	(3.9)	129	----	3.6	(2.08)

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 69

Byrd Station (80.0°S, 120.0°W) September 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.4)	400				3.3	(2.25)
01		(7.0)	(410)				2.9	(2.30)
02		(6.75)	405				3.4	(2.25)
03		6.2	370		---	----	2.4	2.30
84		(5.7)	355		---	----	3.1	(2.42)
05		6.0	340		---	----		2.50
06	---	6.0	310	---	---	----		2.50
07	---	6.0	300	---	131	----		2.70
08	---	7.0	300	---	135	(2.25)		2.68
09	---	0.1	300	---	121	(2.25)		2.70
18	---	8.7	300	---	131	2.32		2.60
11	---	9.4	300	---	<141	(2.50)		2.65
12	---	9.1	315	---	<139	(2.70)		2.65
13	---	(9.8)	310	---	131	(2.35)		(2.65)
14	---	9.1	315	---	121	(2.35)		2.68
15	---	0.0	325	---	131	(2.40)		2.50
16	---	(7.8)	<360	---	135	----		(2.50)
17	---	(6.7)	370	---	---	----		(2.50)
18	---	(7.55)	355	---	---	----	2.4	----
19		(7.1)	335		---	----	2.4	----
20		(6.2)	345		---	----	1.5	----
21		(6.2)	360				3.6	----
22		(4.7)	(410)				2.8	(2.40)
23		(5.5)	<300				3.2	(2.25)

Time: 120.8°W.
Sweep: 1.0 Mc to 25.8 Mc in 13.5 seconds.

Table 70

Freiburg, Germany (48.1°N, 7.6°E) August 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	295				(2.0)	2.55
01		6.2	300				(2.4)	2.55
02		5.9	300				2.2	2.55
03		5.6	300				(2.0)	2.55
84		5.4	280				2.1	2.65
05	---	6.1	260	---	121	2.05	2.4	2.90
06	---	7.2	240	---	109	2.70	3.3	3.05
07	(375)	7.6	230	4.9	107	3.10	3.9	2.90
88	325	8.2	220	5.1	103	3.45	4.1	2.85
09	335	0.5	215	5.3	103	3.65	4.4	2.85
18	370	8.6	215	5.6	103	3.80	4.4	2.75
11	355	9.0	215	5.6	101	4.00	4.2	2.75
12	360	8.6	220	5.6	101	3.95	4.0	2.70
13	355	8.6	220	5.6	103	3.90	3.9	2.75
14	360	0.5	220	5.5	103	3.75		2.80
15	350	8.3	230	5.2	104	3.50		2.80
16	(325)	8.4	230	5.0	106	3.25	3.4	2.80
17	---	8.4	245		107	2.75	3.2	2.85
18	---	8.4	260		119	2.15	2.8	2.85
19		8.4	255				2.3	2.85
20		8.1	260				(2.7)	2.75
21		7.4	260				(2.3)	2.65
22		7.1	280				2.4	2.60
23		6.8	295				1.9	2.60

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 71

Byrd Station (00.0°S, 120.0°W) August 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.15)	430				3.2	----
01		(5.15)	400				3.4	(2.42)
02		(4.4)	<415				3.2	(2.30)
03		(4.9)	355				3.2	(2.45)
04		(4.5)	330				2.9	(2.60)
05		(3.75)	340				2.1	(2.60)
06		(3.5)	335				2.0	(2.60)
07		3.1	310		---	----		2.68
00		3.9	315		---	----		2.70
09		4.75	320		---	----		2.70
18		5.6	300		---	----		2.75
11		(5.95)	300		<149	(1.62)		2.78
12		(5.8)	300		<131	----		(2.80)
13		(6.0)	315		129	----	2.0	(2.80)
14		(5.1)	330		131	(1.65)	2.2	(2.60)
15		(6.0)	365		---	----	2.0	(2.65)
16		(4.85)	375				2.5	(2.52)
17		(4.4)	405				3.2	(2.50)
18		(3.8)	(350)				3.2	(2.30)
19		(4.2)	400				3.6	----
20		(5.4)	380				3.1	----
21		---	355				3.9	
22		---	360				4.0	----
23		(4.85)	395				3.1	(2.30)

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 72

Leopoldville, Belgian Congo (4.3°S, 15.3°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	4.8						3.1
81	210	(4.8)					2.6	(3.05)
82	230	2.9					2.9	2.9
83	220	2.7					2.8	3.05
04	230	(2.9)					2.5	(2.9)
85	250	3.8					2.6	3.0
06	250	6.6	235	---	110	2.2	3.4	3.05
87	260	7.4	225	---	110	2.8	3.9	3.0
88	270	8.0	220	---	105	3.2	4.0	3.8
09	275	8.7	215	4.6	105	3.3	4.5	3.0
18	280	8.1	210	4.6	105	3.5	4.5	2.9
11	305	8.1	200	4.5	105	3.5	4.1	2.8
12	310	9.2	205	4.6	105	3.3	3.9	2.7
13	295	9.8	205	4.4	105	3.2	3.8	2.8
14	290	10.4	220	---	105	3.0	3.8	2.8
15	260	10.2	230	---	110	2.7	3.8	2.9
16	235	9.8	235	---	---	---	3.5	3.0
17	220	9.0					2.8	3.0
18	210	8.0					2.9	3.1
19	210	6.1					2.7	3.2
20	215	4.0					2.8	3.1
21	250	3.6					2.6	2.8
22	230	4.8					2.6	2.9
23	230	(4.5)					2.5	(2.8)

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

USCOMM-NBS-BL

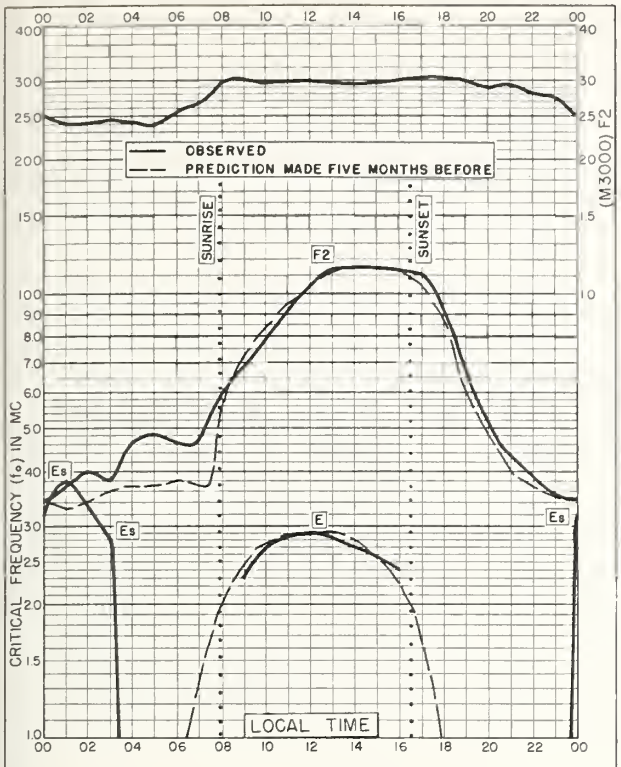


Fig. 1. ANCHORAGE, ALASKA
61.2°N, 149.9°W FEBRUARY 1959

NBS 503

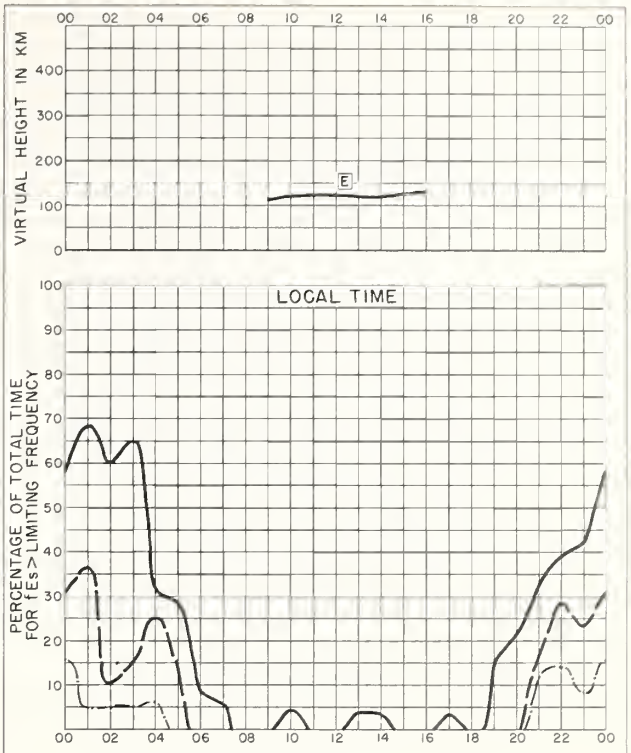


Fig. 2. ANCHORAGE, ALASKA FEBRUARY 1959

NBS 490

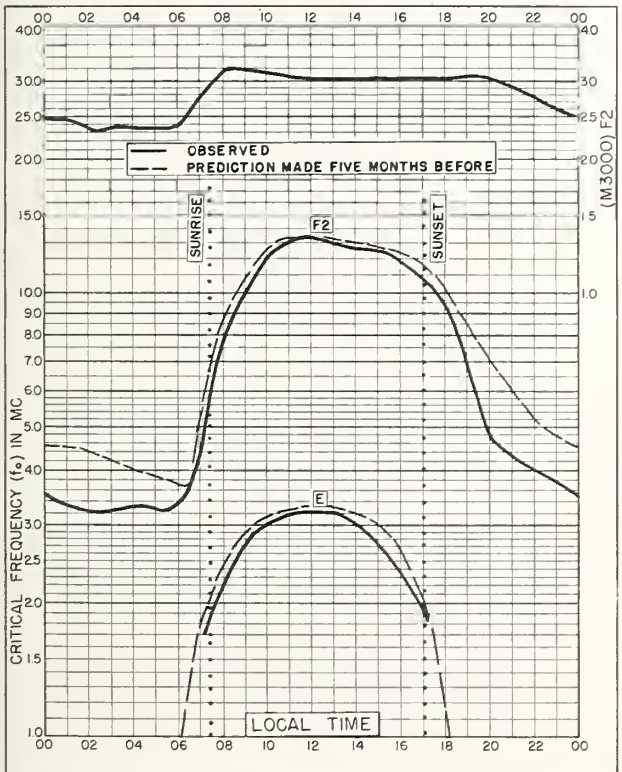


Fig. 3. ADAK, ALASKA
51.9°N, 176.6°W FEBRUARY 1959

NBS 503

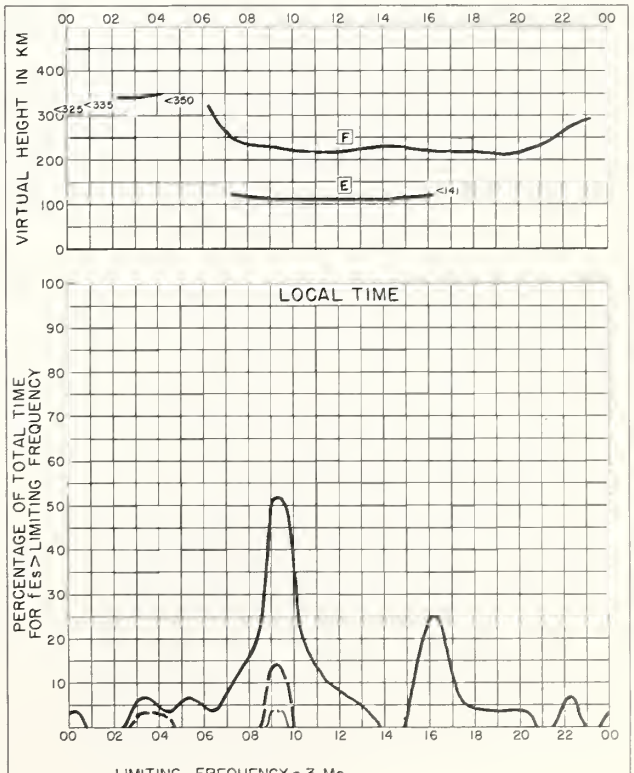


Fig. 4. ADAK, ALASKA FEBRUARY 1959

NBS 490

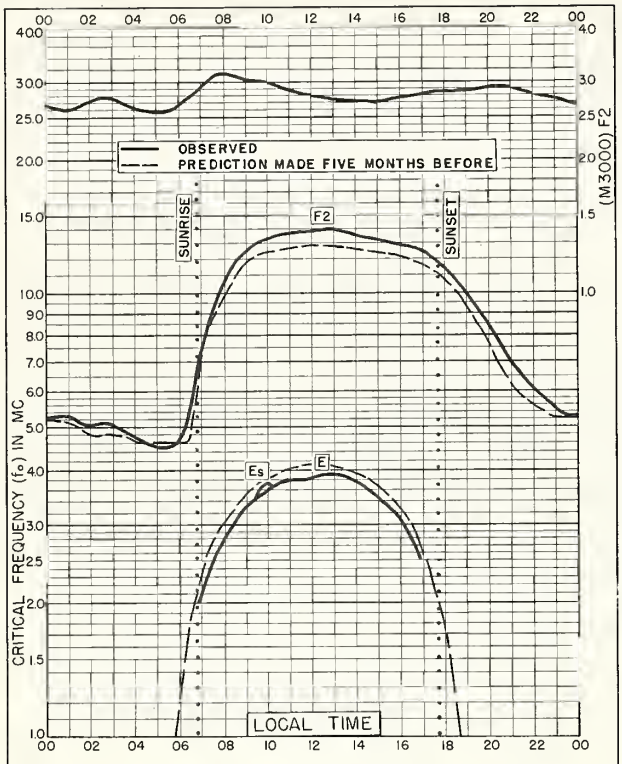
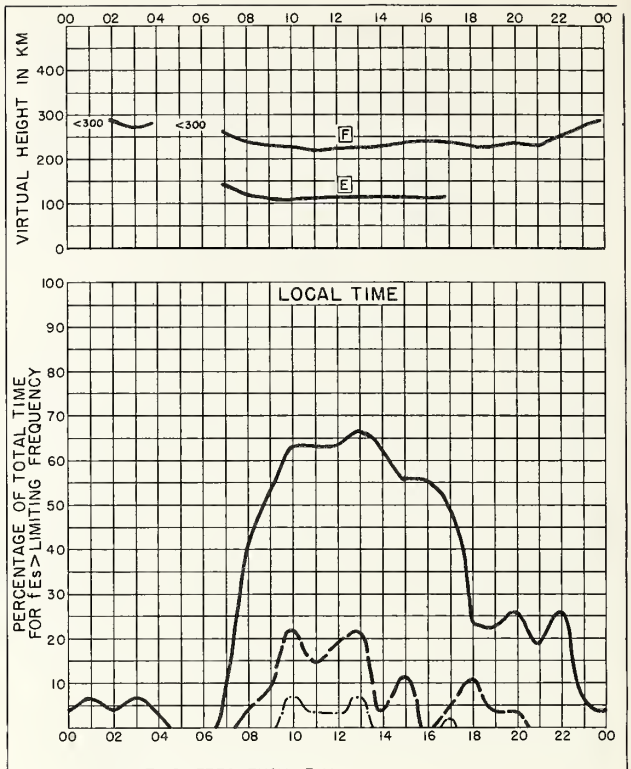


Fig. 5. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W FEBRUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503



FEBRUARY 1959

Fig. 6. WHITE SANDS, NEW MEXICO

Commerce-Standards-Boulder, Colo. NBS 490

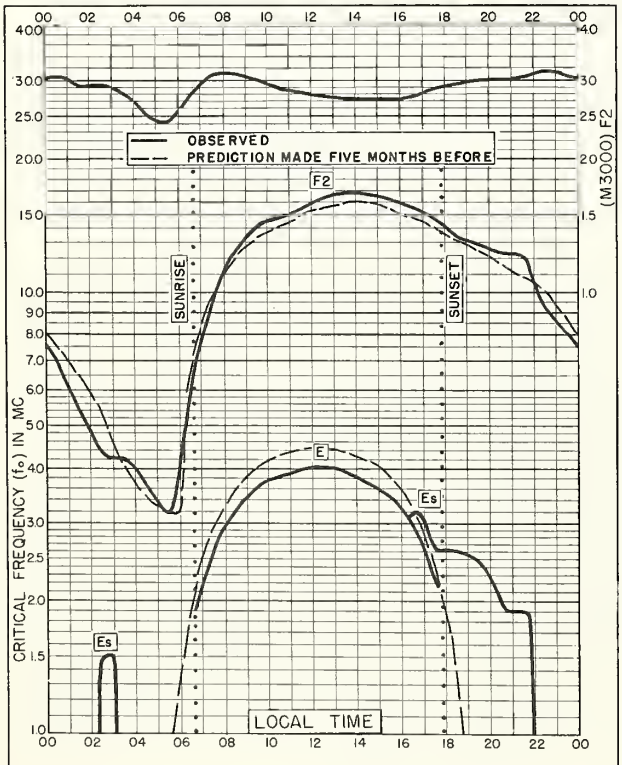


Fig. 7. MAUI, HAWAII
20.8°N, 156.5°W FEBRUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503

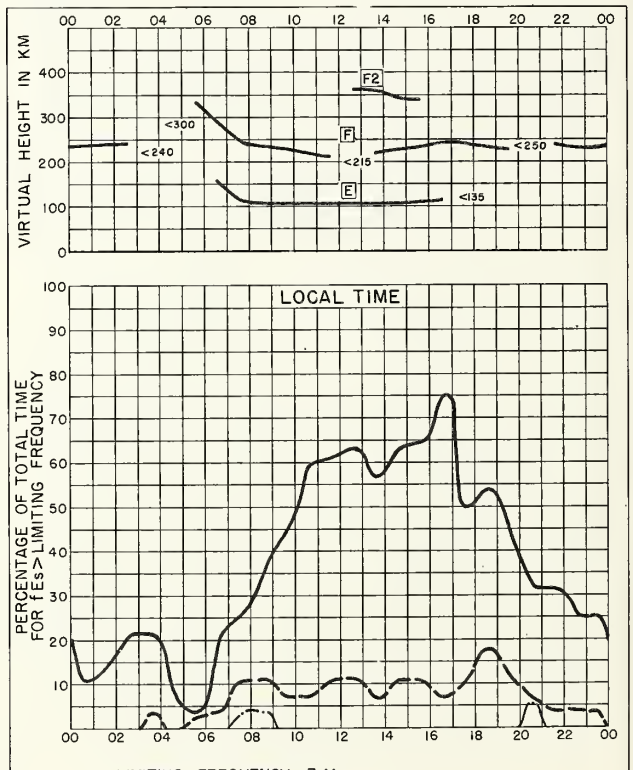


Fig. 8. MAUI, HAWAII FEBRUARY 1959

Commerce-Standards-Boulder, Colo. NBS 490

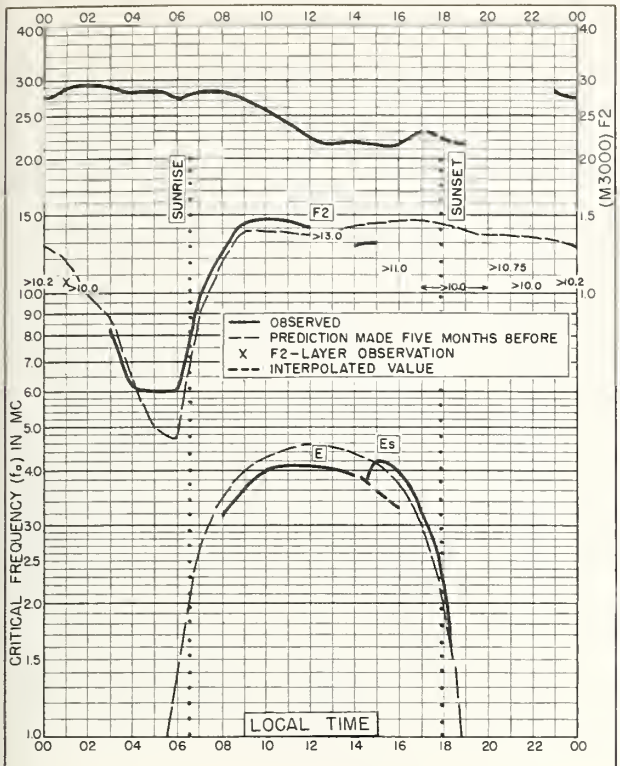


Fig. 9. BAGUIO, P. I.
16.4°N, 120.6°E FEBRUARY 1959

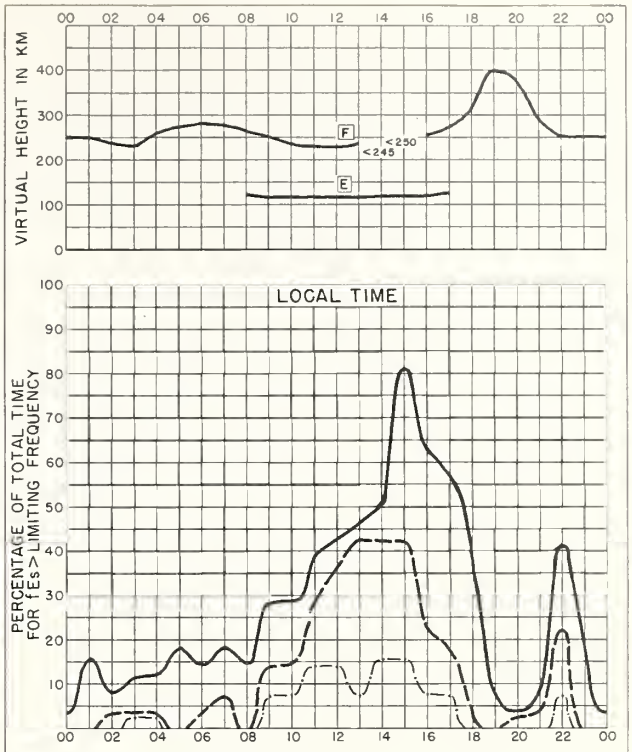


Fig. 10. BAGUIO, P. I. FEBRUARY 1959

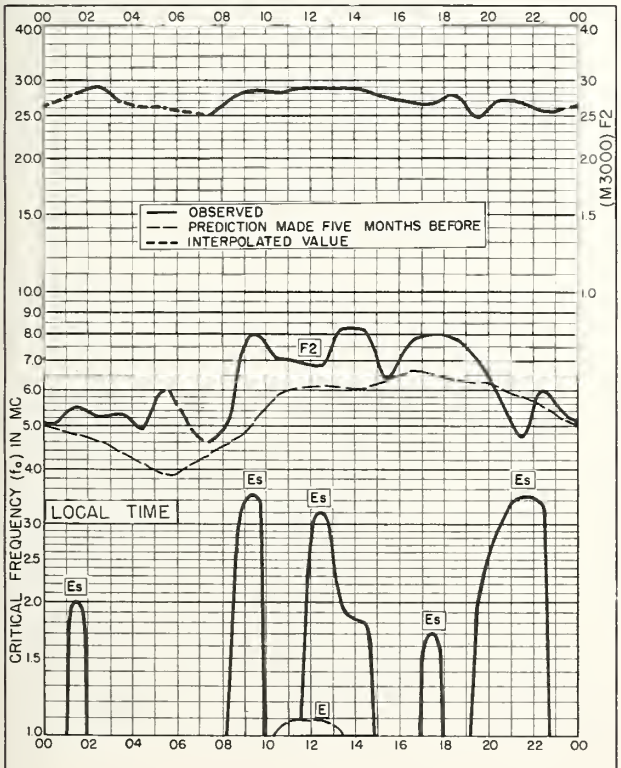


Fig. 11. THULE, GREENLAND
76.6°N, 68.7°W JANUARY 1959

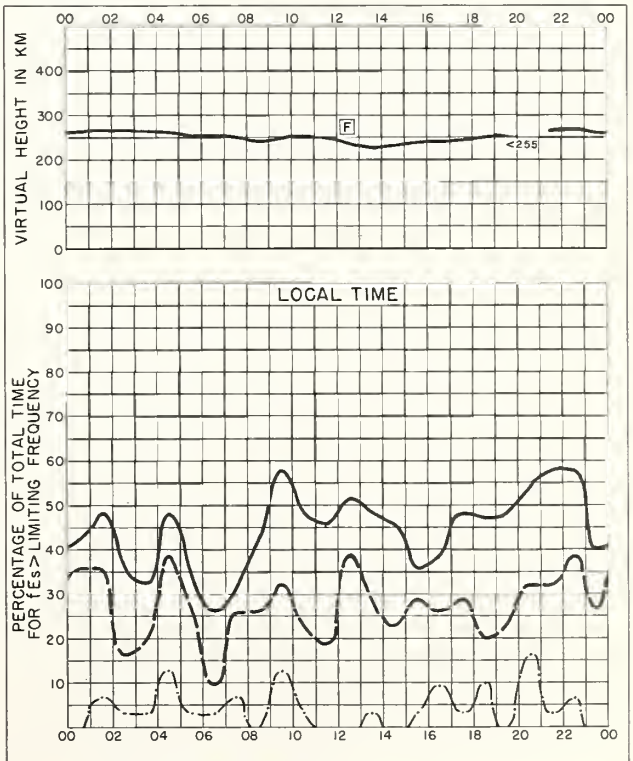


Fig. 12. THULE, GREENLAND JANUARY 1959

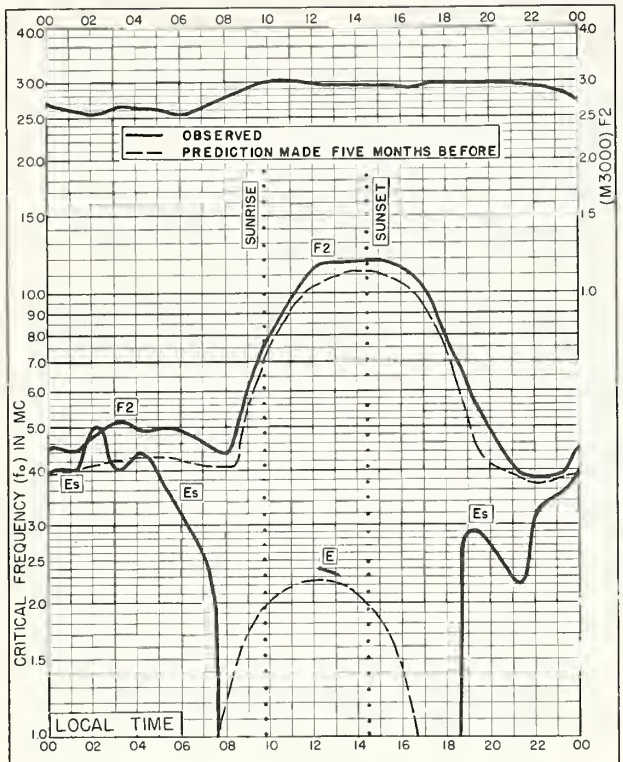


Fig. 13. FAIRBANKS, ALASKA
64.9°N, 147.8°W JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503

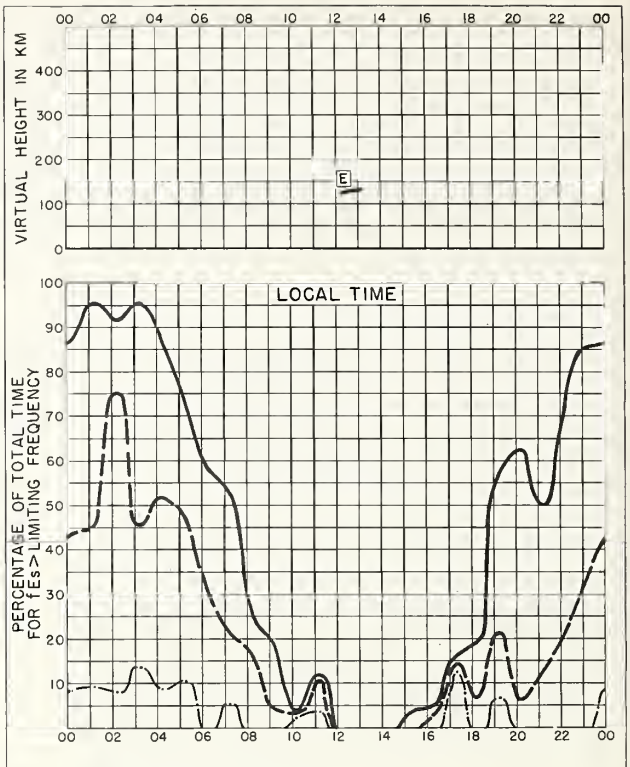


Fig. 14. FAIRBANKS, ALASKA JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 490

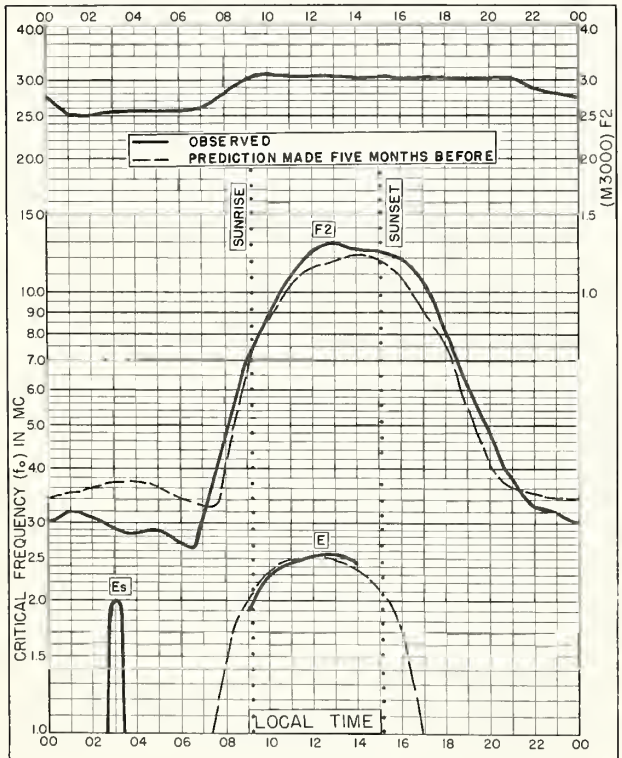


Fig. 15. ANCHORAGE, ALASKA
61.2°N, 149.9°W JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503

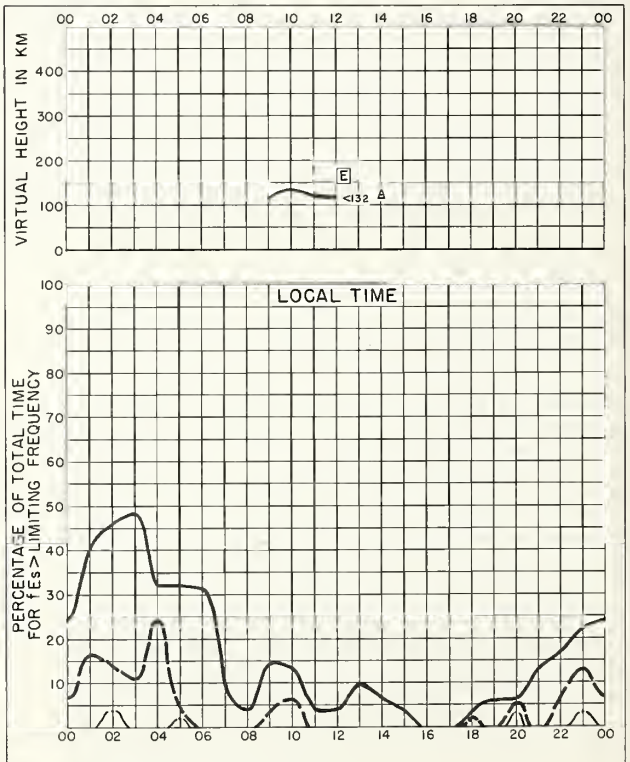


Fig. 16. ANCHORAGE, ALASKA JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 490

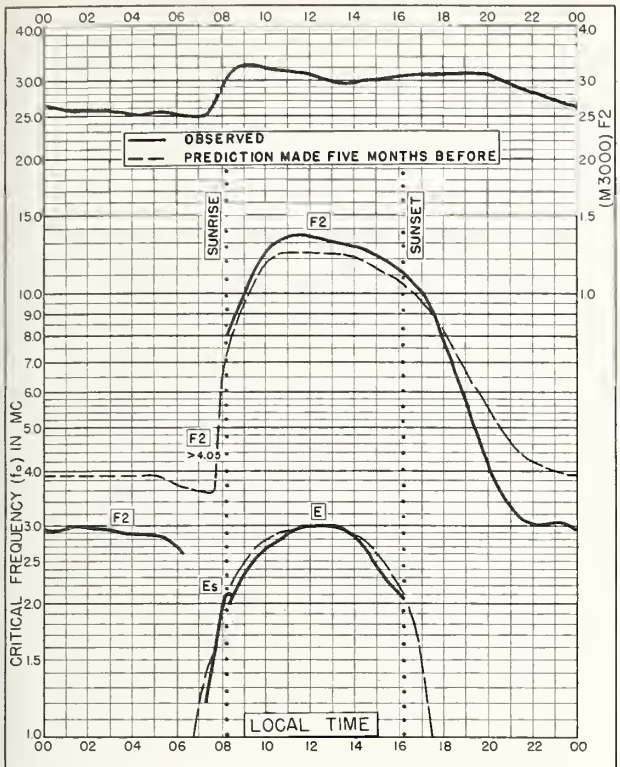


Fig. 17. ADAK, ALASKA
51.9°N, 176.6°W JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503

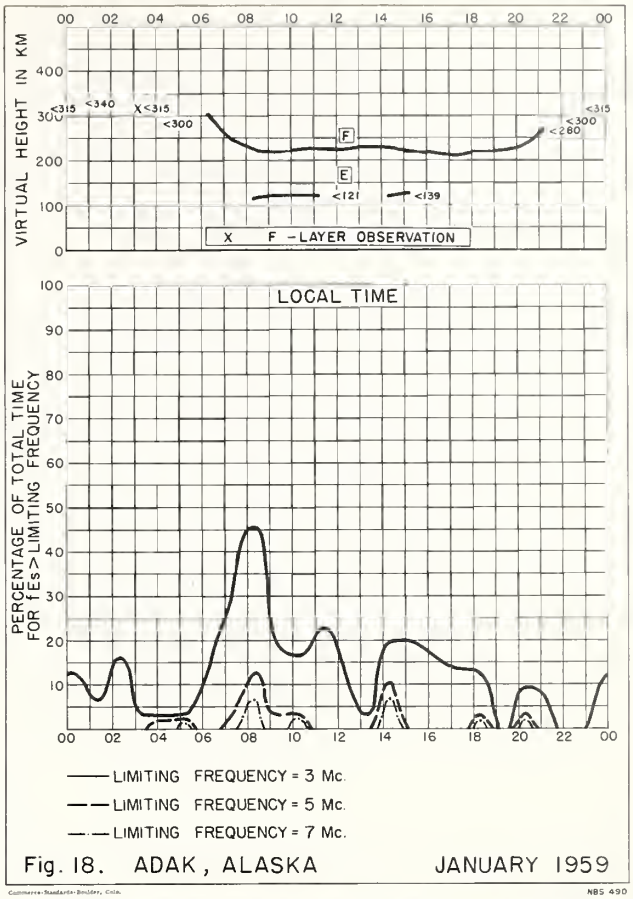


Fig. 18. ADAK, ALASKA JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 490

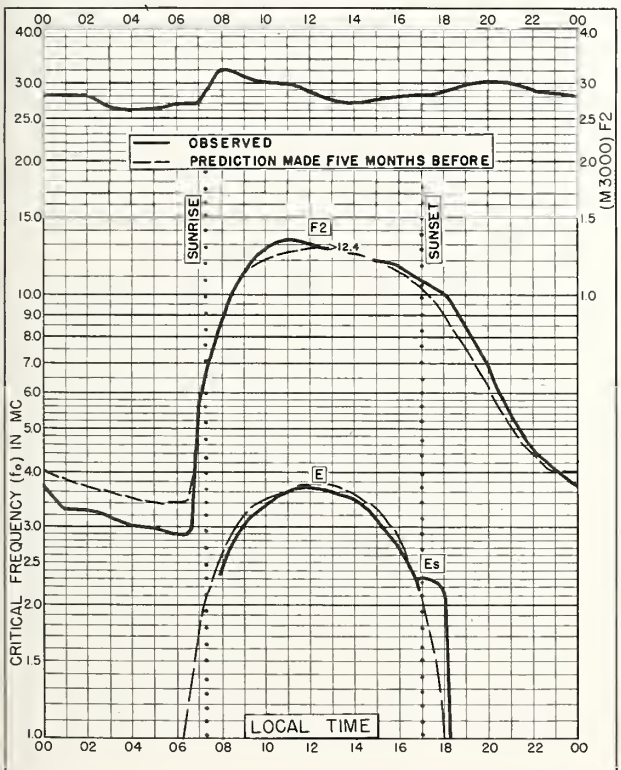
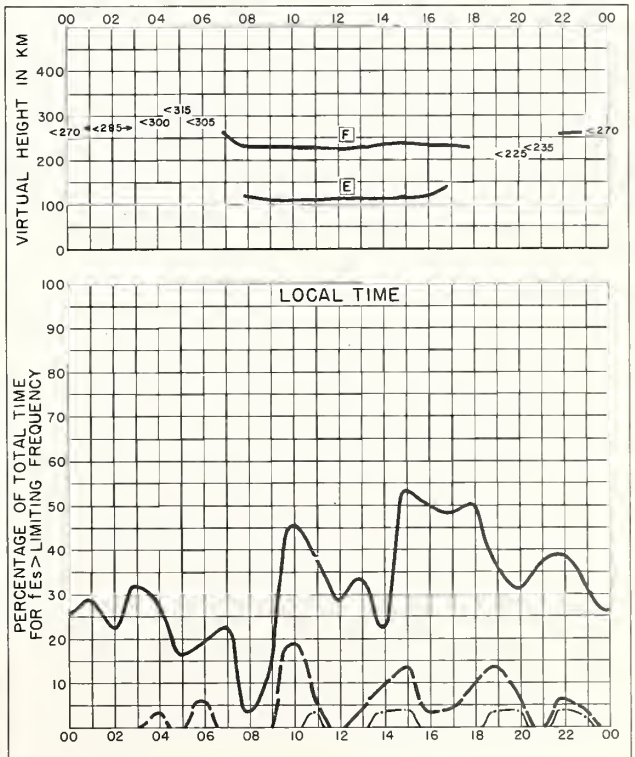


Fig. 19. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W JANUARY 1959

Commerce-Standards-Boulder, Colo. NBS 503



JANUARY 1959
Fig. 20. SAN FRANCISCO, CALIFORNIA

Commerce-Standards-Boulder, Colo. NBS 490

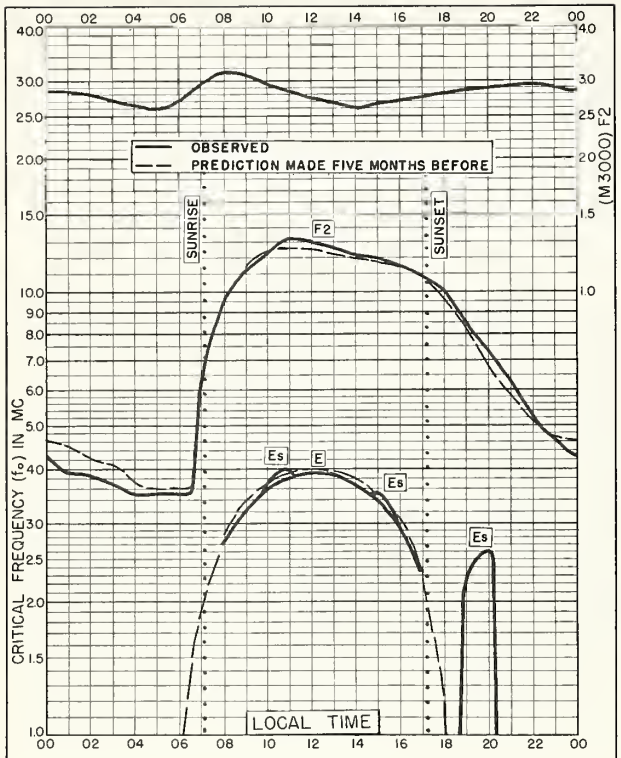
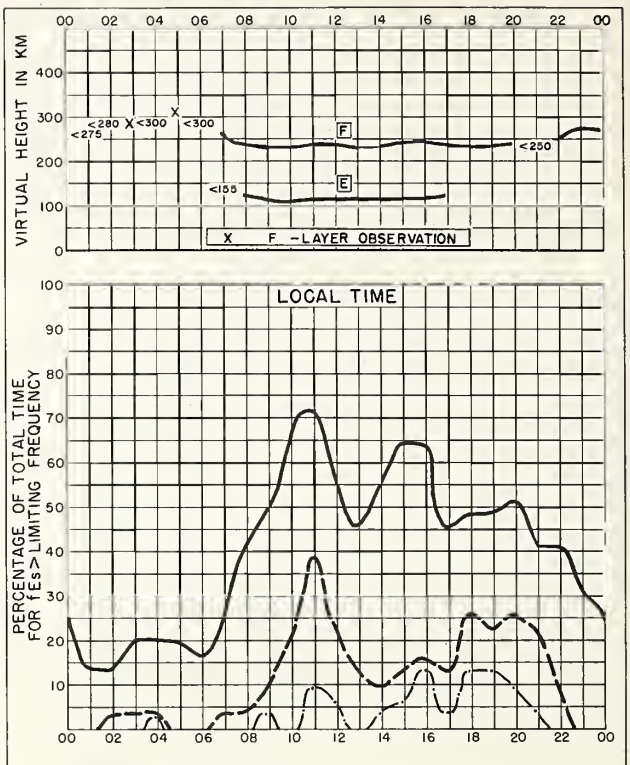


Fig. 21. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W JANUARY 1959

NBS 503



JANUARY 1959
Fig. 22. WHITE SANDS, NEW MEXICO

NBS 490

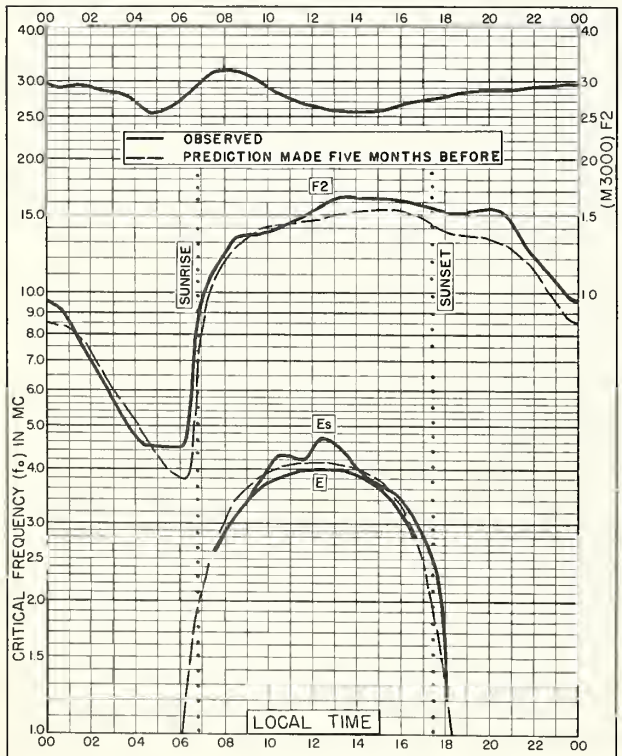


Fig. 23. OKINAWA I.
26.3°N, 127.8°E JANUARY 1959

NBS 503

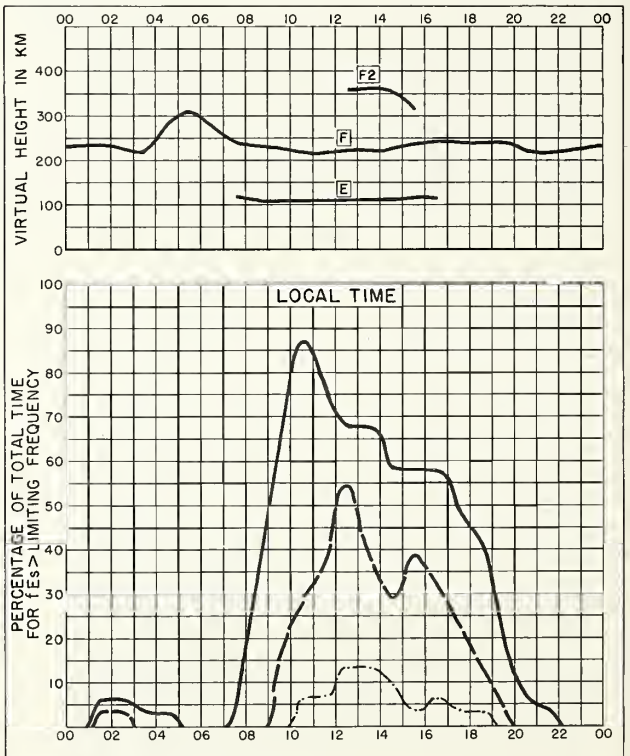


Fig. 24. OKINAWA I. JANUARY 1959

NBS 490

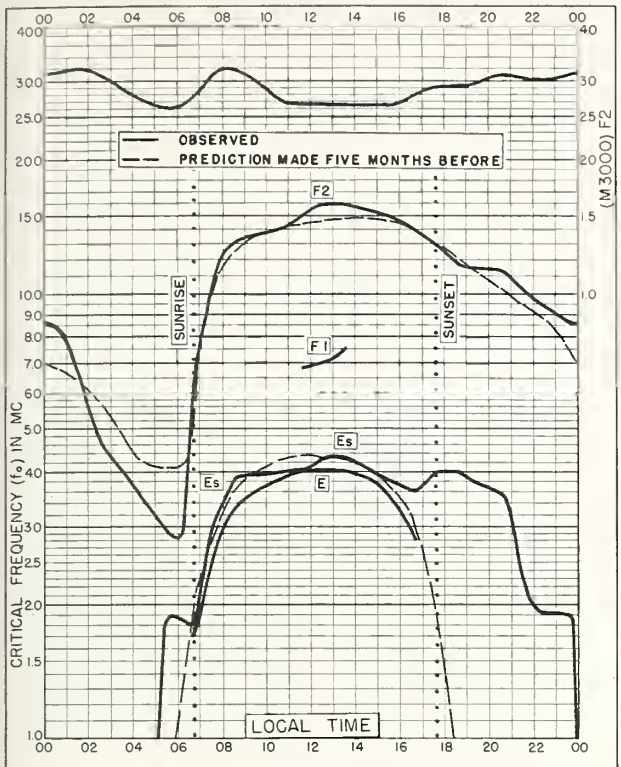


Fig. 25. MAUI, HAWAII
20.8°N, 156.5°W JANUARY 1959

NBS 503

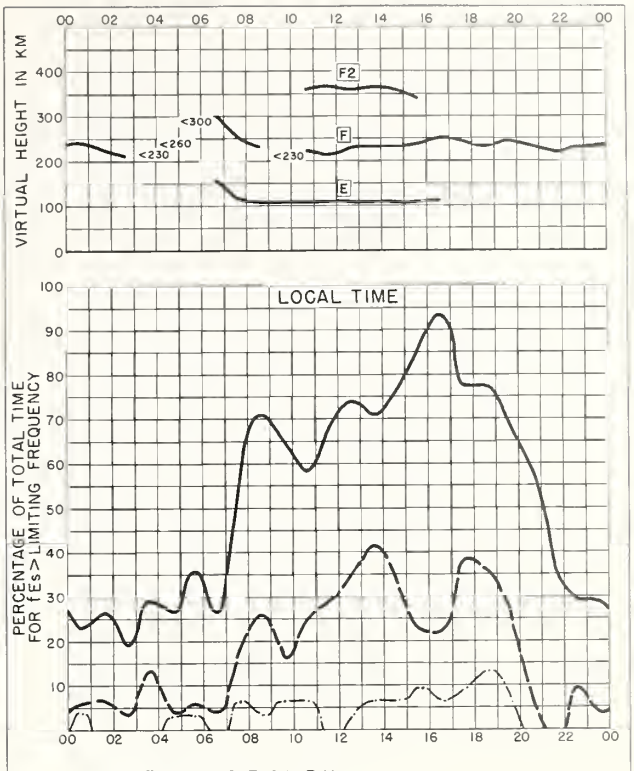


Fig. 26. MAUI, HAWAII JANUARY 1959

NBS 490

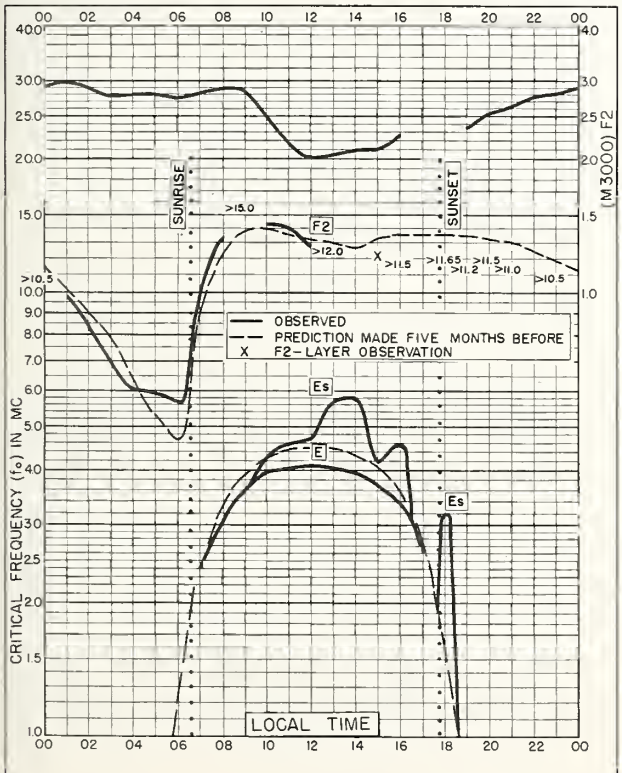


Fig. 27. BAGUIO, P. I.
16.4°N, 120.6°E JANUARY 1959

NBS 503

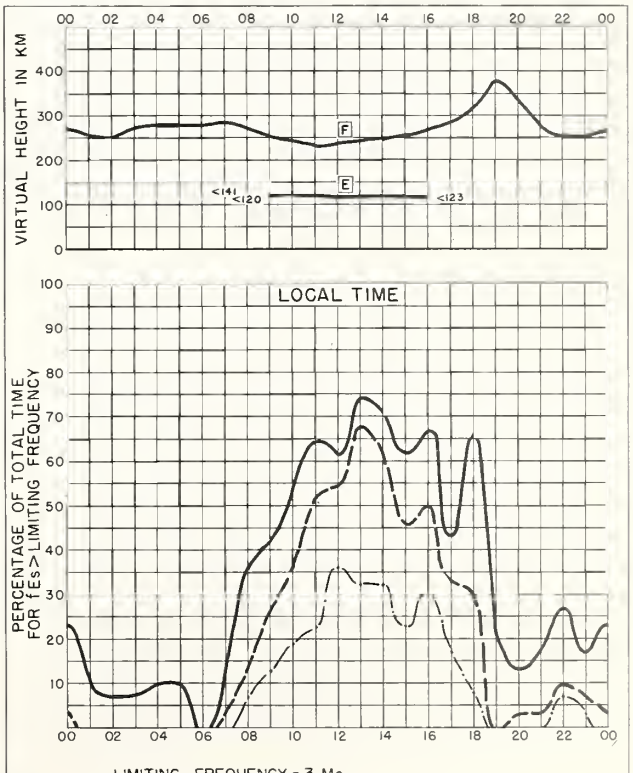


Fig. 28. BAGUIO, P. I. JANUARY 1959

NBS 490

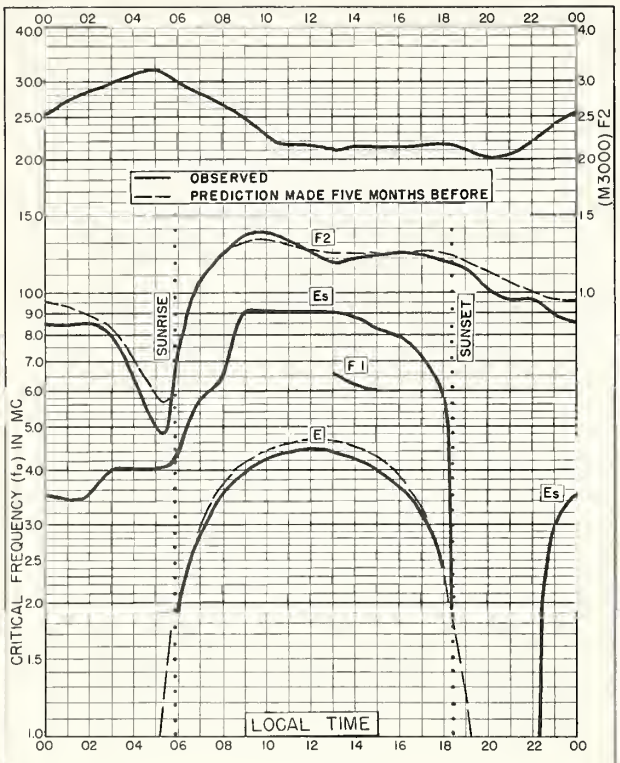


Fig. 29. HUANCAYO, PERU
12.0°S, 75.3°W JANUARY 1959

NBS 503

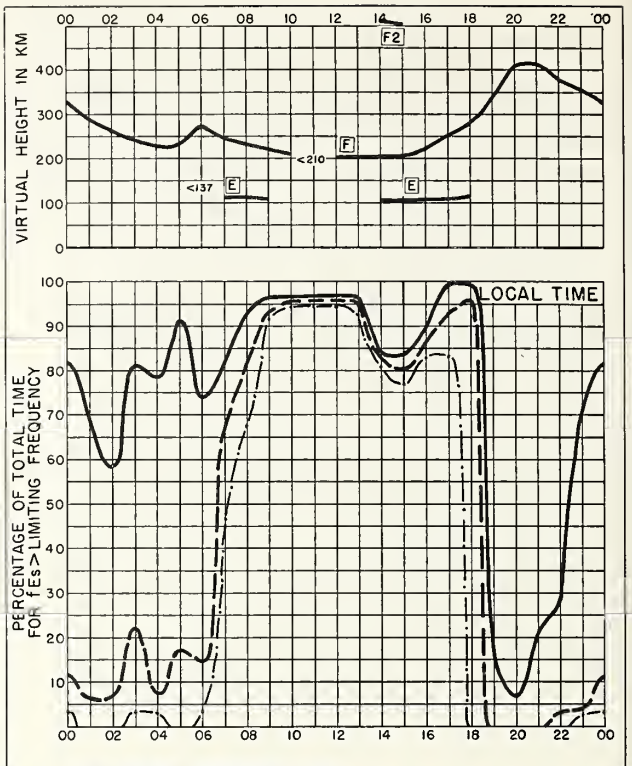


Fig. 30. HUANCAYO, PERU JANUARY 1959

NBS 490

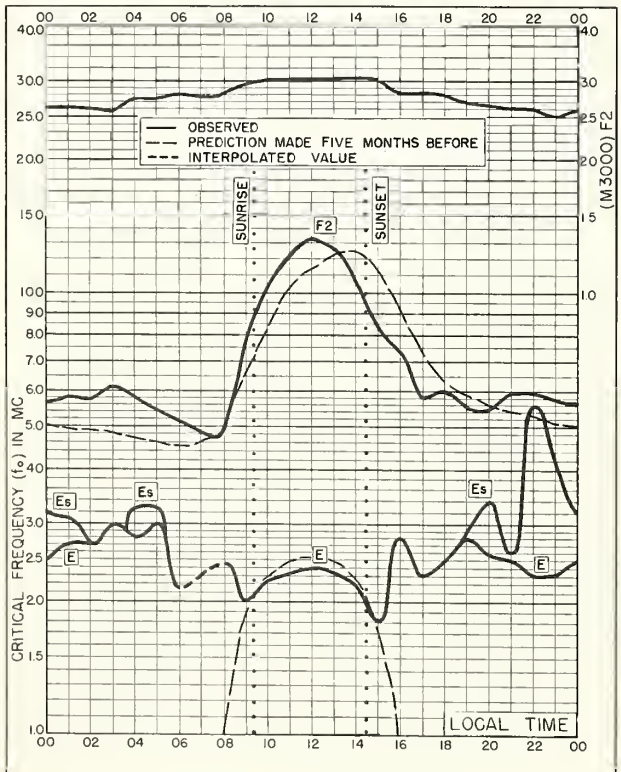


Fig. 31. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W DECEMBER 1958

NBS 503

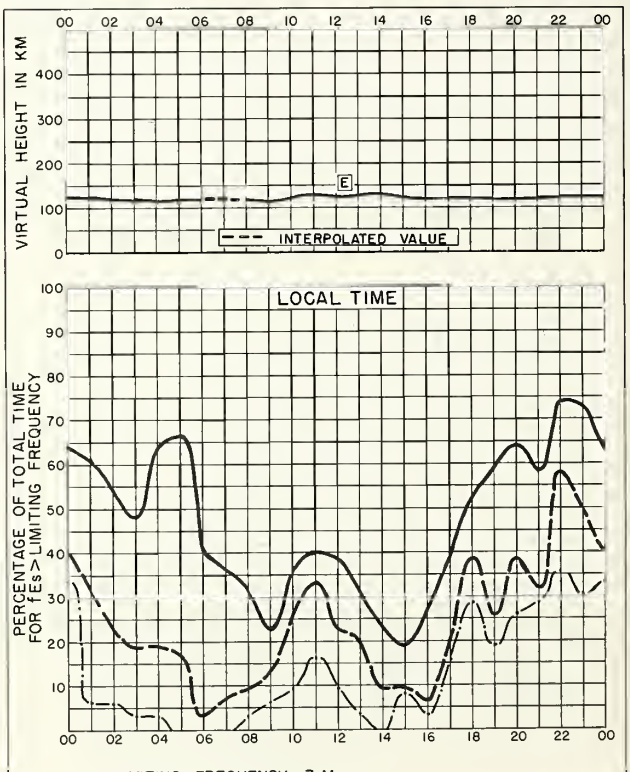


Fig. 32. NARSARSSUAK, GREENLAND DECEMBER 1958

NBS 490

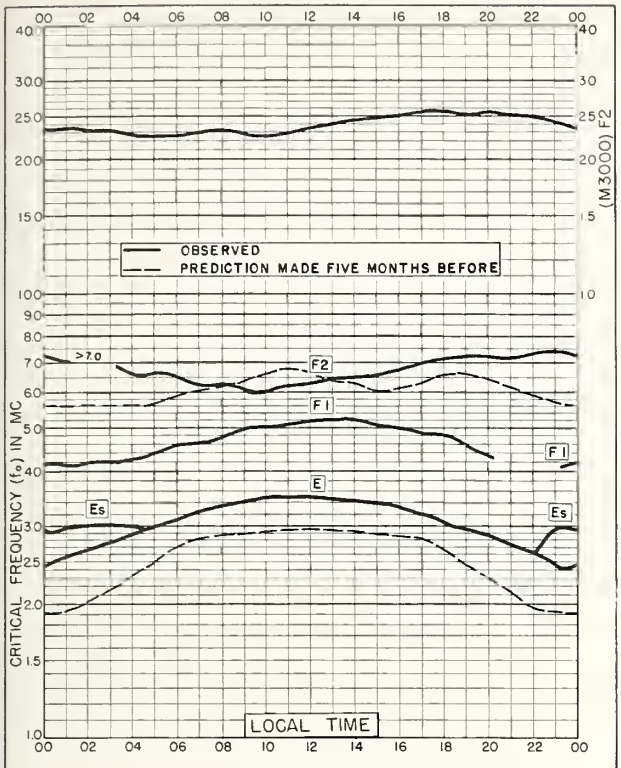


Fig. 33. ELLSWORTH
77.7°S, 41.1°W DECEMBER 1958

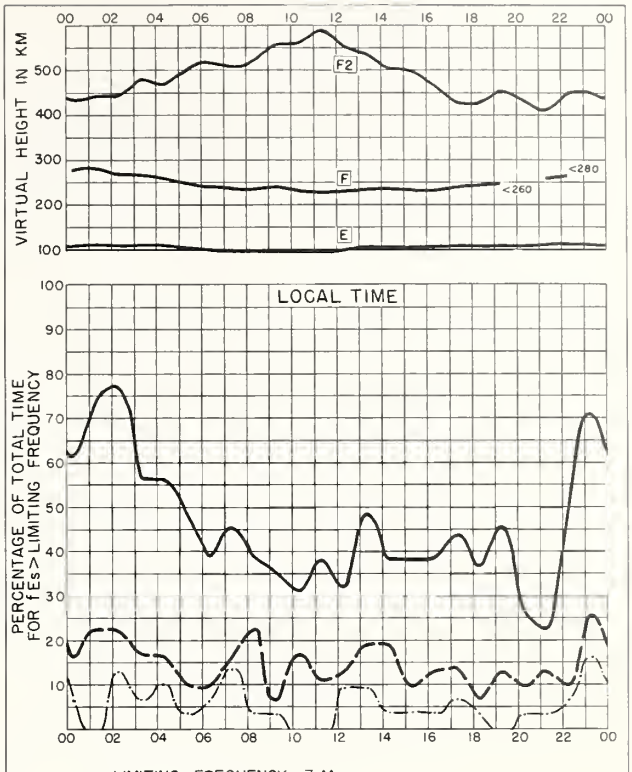


Fig. 34. ELLSWORTH DECEMBER 1958

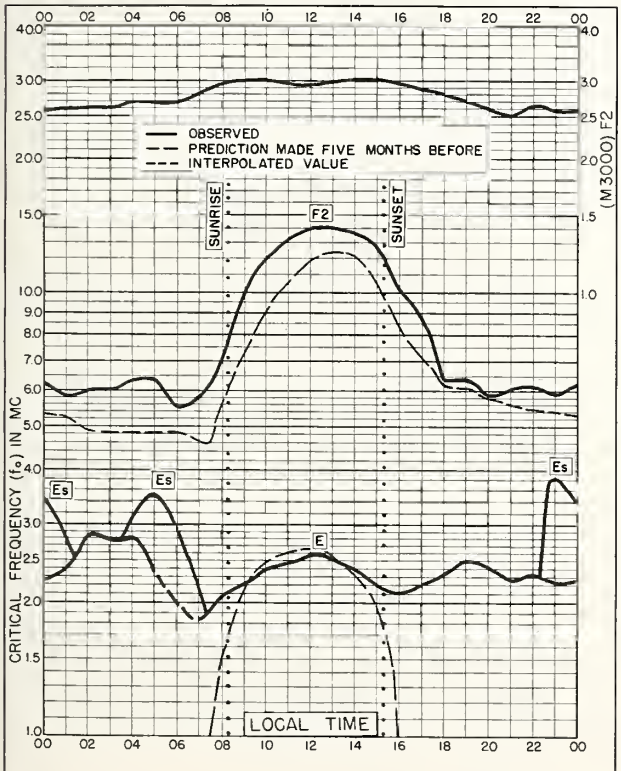


Fig. 35. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W NOVEMBER 1958

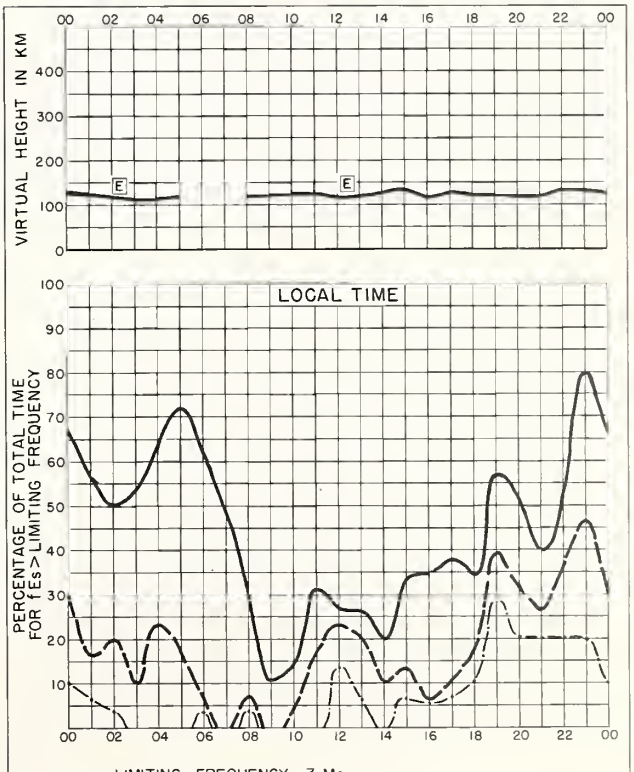


Fig. 36. NARSARSSUAK, GREENLAND NOVEMBER 1958

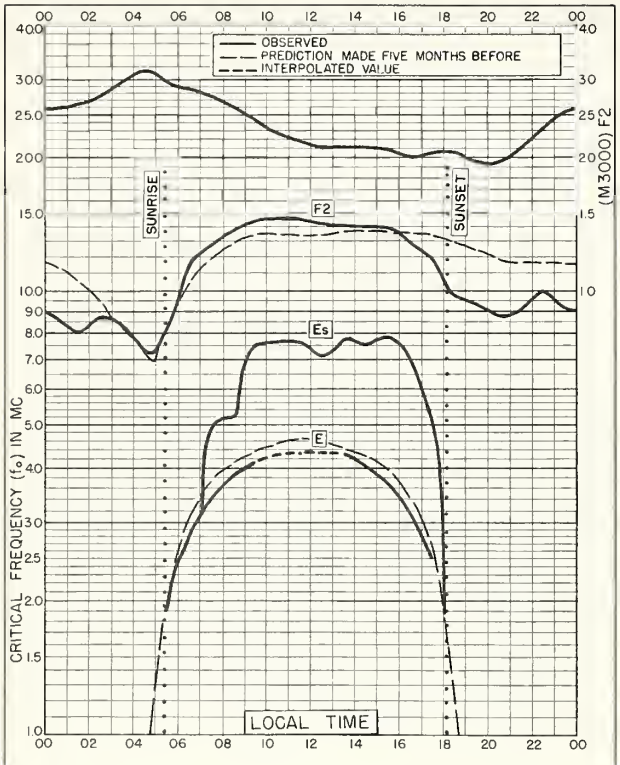


Fig. 37. La PAZ, BOLIVIA
16.5°S, 68.0°W NOVEMBER 1958

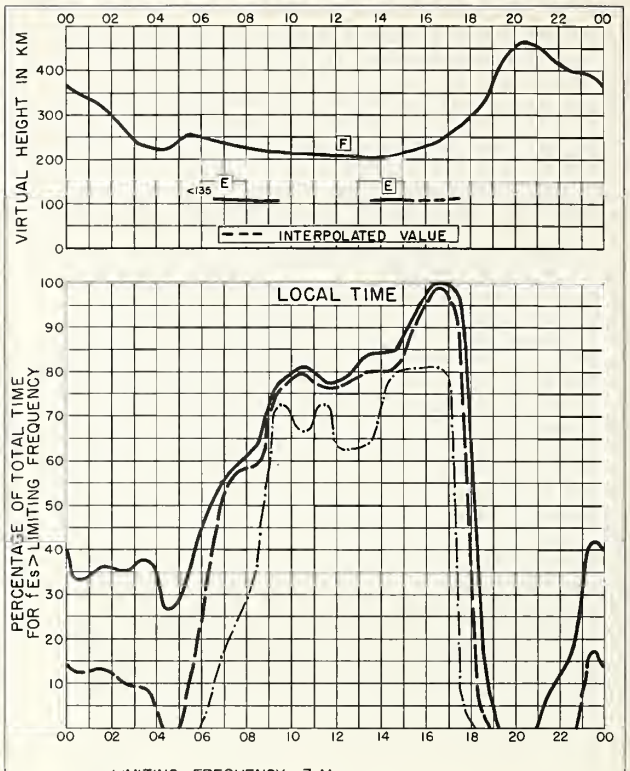


Fig. 38. La PAZ, BOLIVIA NOVEMBER 1958

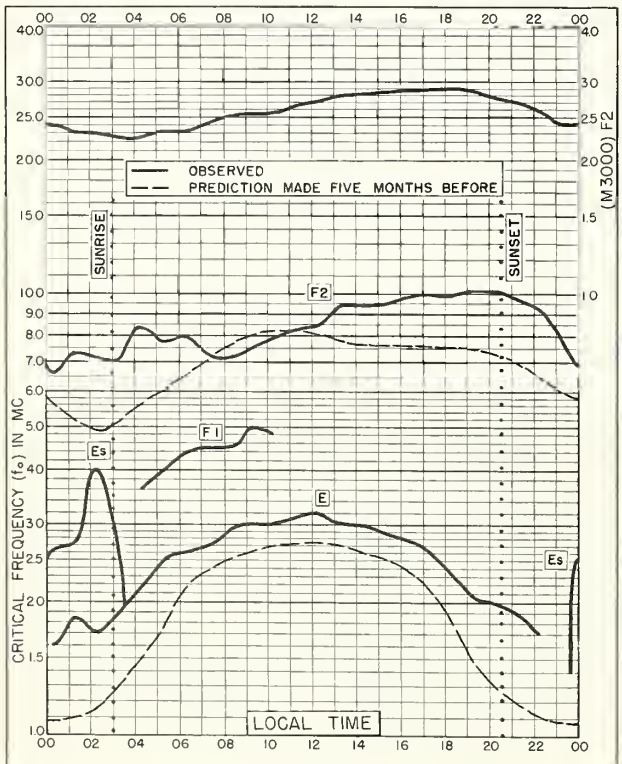


Fig. 39. ELLSWORTH
77.7°S, 41.1°W OCTOBER 1958

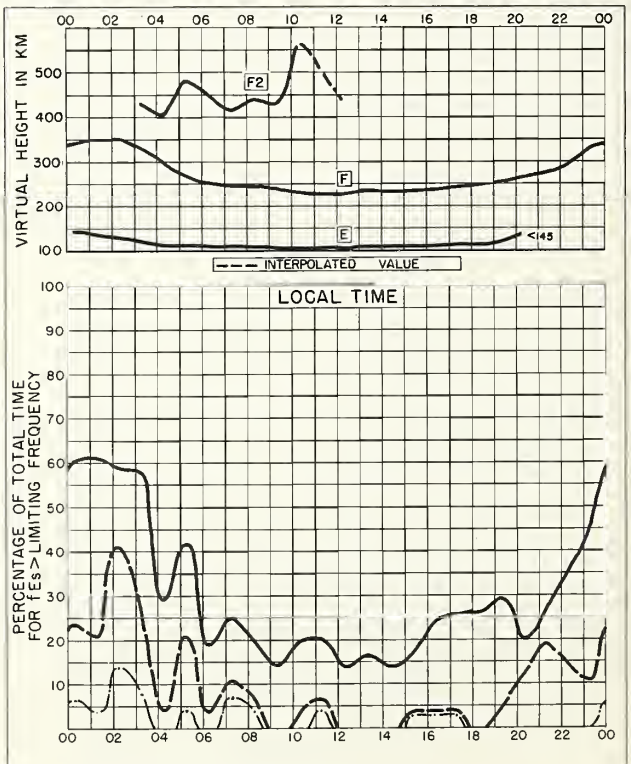


Fig. 40. ELLSWORTH OCTOBER 1958

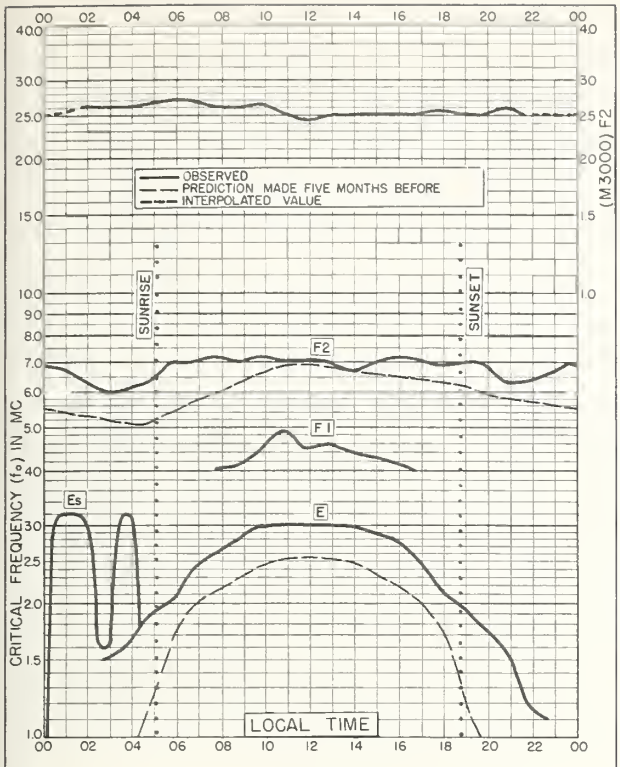


Fig. 41. RESOLUTE BAY, CANADA
74.7°N, 94.9°W SEPTEMBER 1958

Commerce-Standard-Boulder, Colo. NBS 503

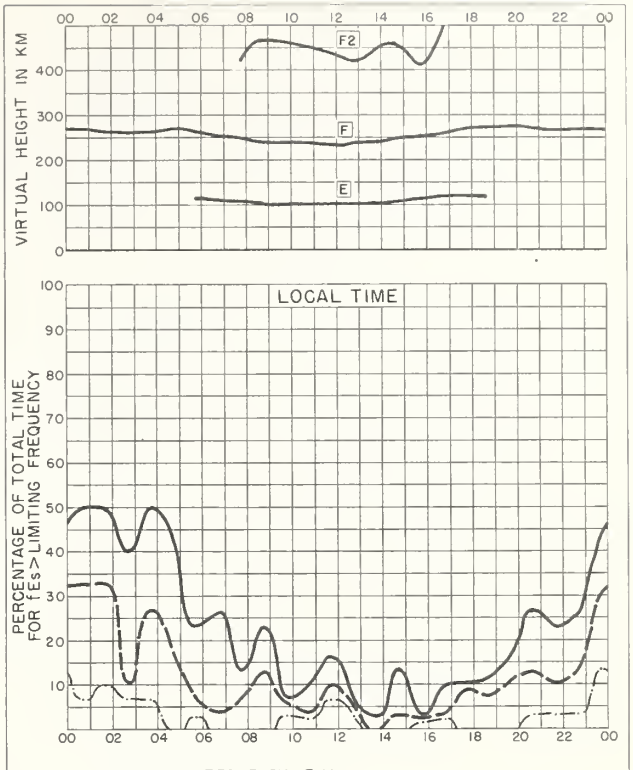


Fig. 42. RESOLUTE BAY, CANADA

Commerce-Standard-Boulder, Colo. NBS 490

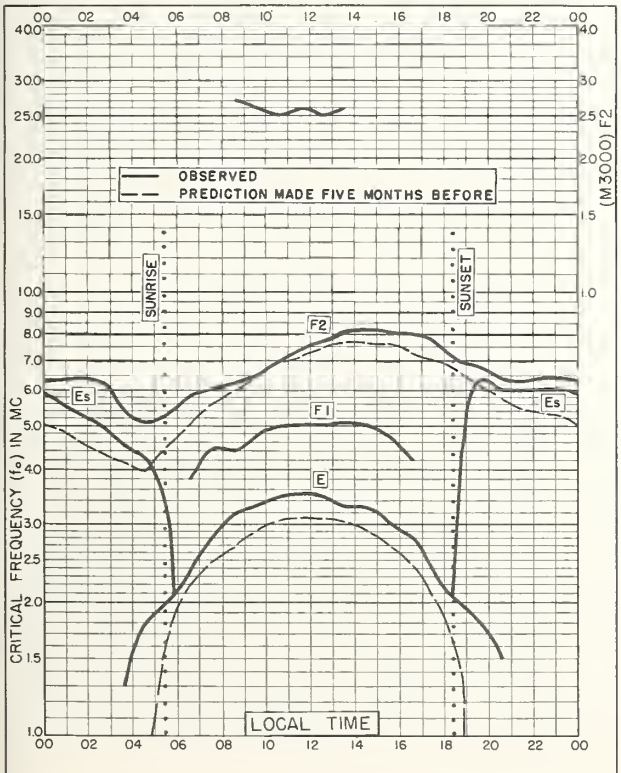


Fig. 43. BAKER LAKE, CANADA
64.3°N, 96.0°W SEPTEMBER 1958

Commerce-Standard-Boulder, Colo. NBS 503

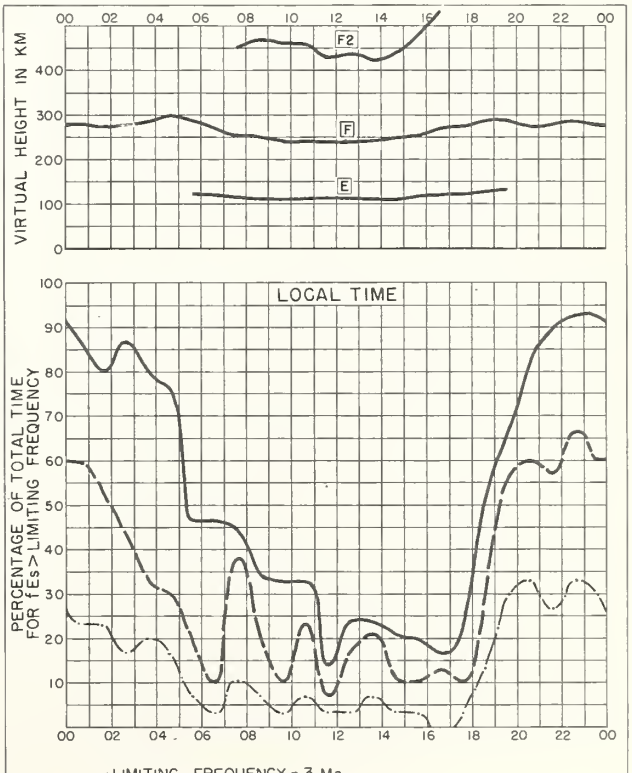


Fig. 44. BAKER LAKE, CANADA SEPTEMBER 1958

Commerce-Standard-Boulder, Colo. NBS 490

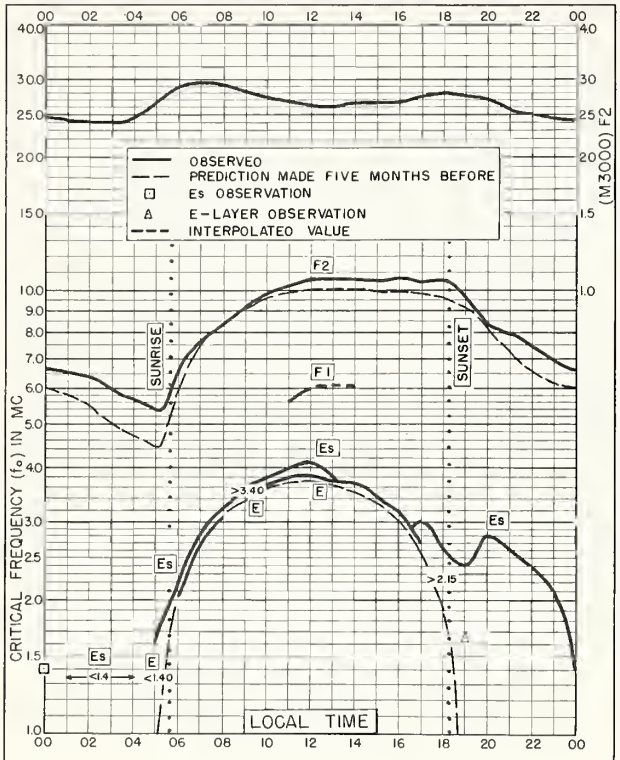


Fig. 45. SLOUGH, ENGLAND
51.5°N, 0.6°W SEPTEMBER 1958

NBS 503

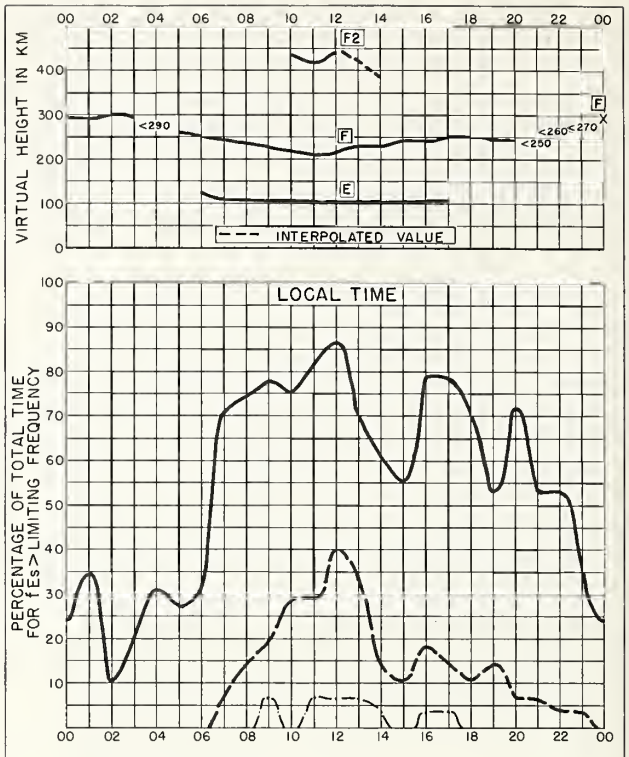


Fig. 46. SLOUGH, ENGLAND SEPTEMBER 1958

NBS 490

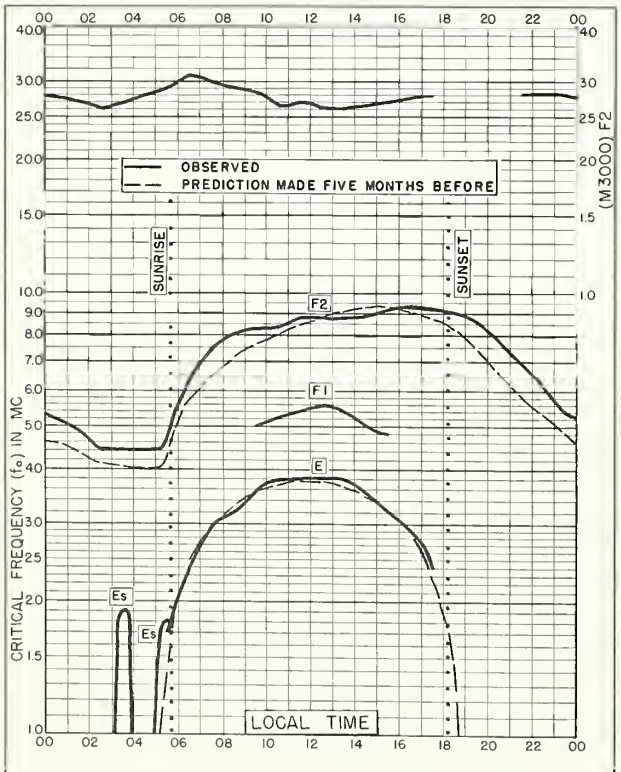


Fig. 47. WINNIPEG, CANADA
49.9°N, 97.4°W SEPTEMBER 1958

NBS 503

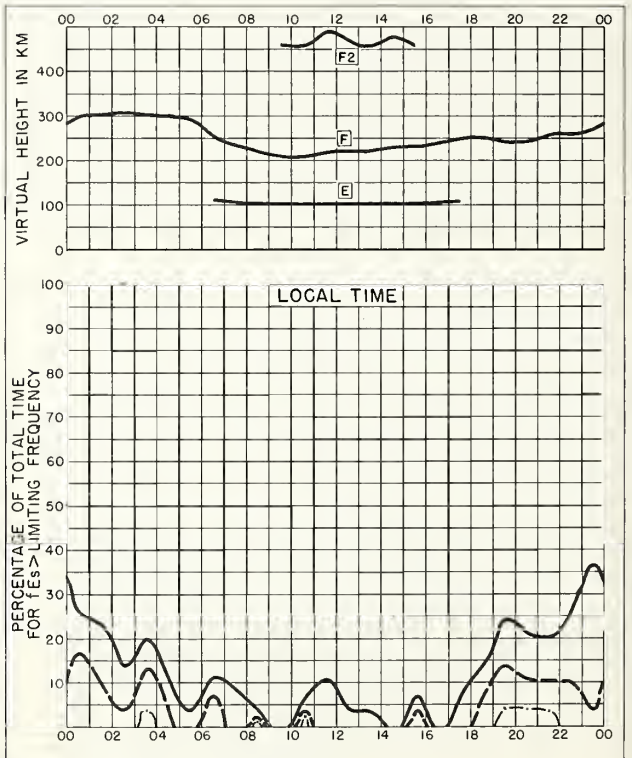


Fig. 48. WINNIPEG, CANADA SEPTEMBER 1958

NBS 490

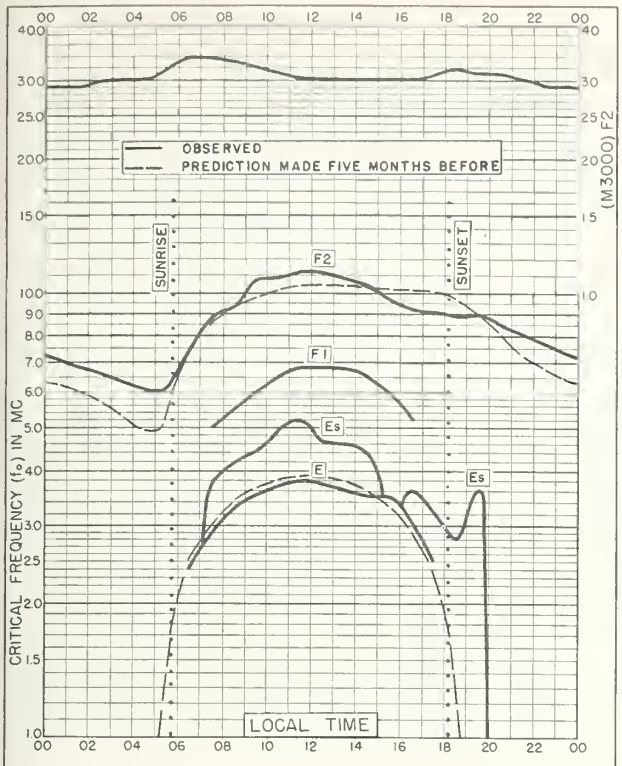


Fig. 49. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E SEPTEMBER 1958

NBS 503

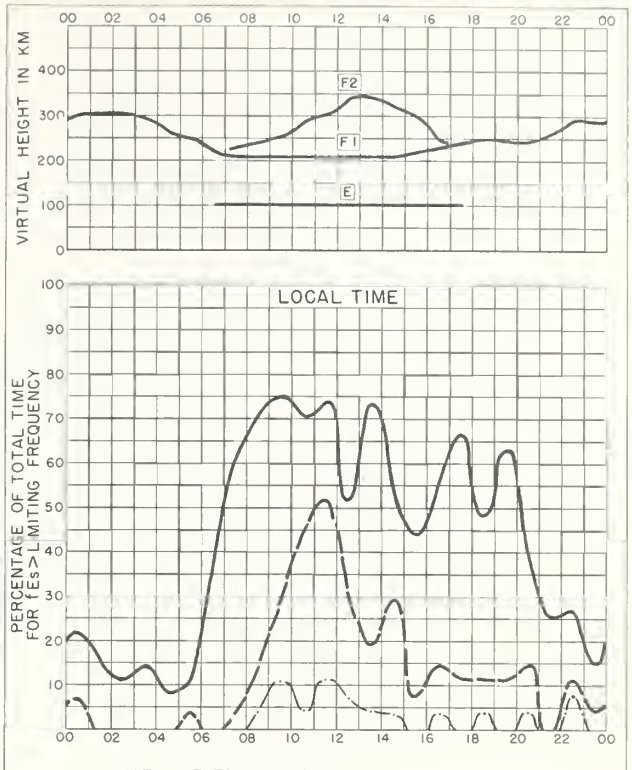


Fig. 50. SCHWARZENBURG, SWITZERLAND SEPTEMBER 1958

NBS 490

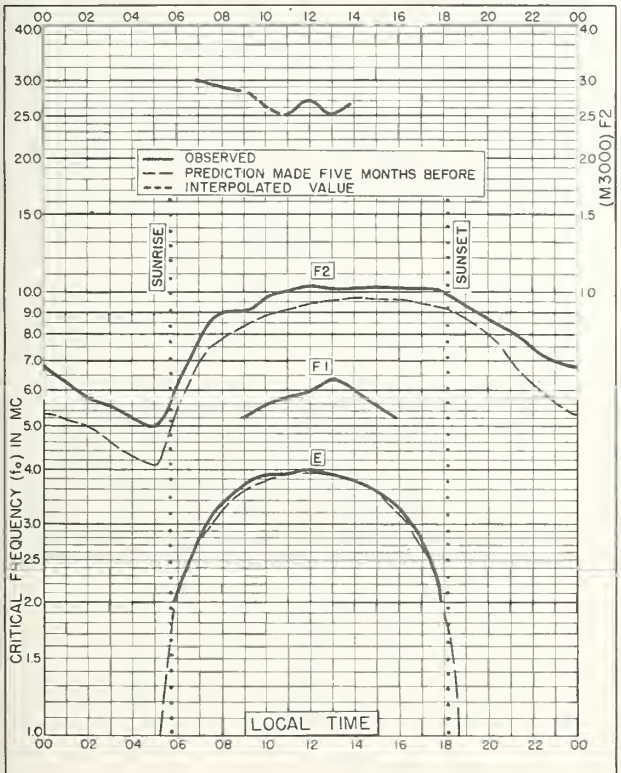


Fig. 51. OTTAWA, CANADA
45.4°N, 75.9°W SEPTEMBER 1958

NBS 503

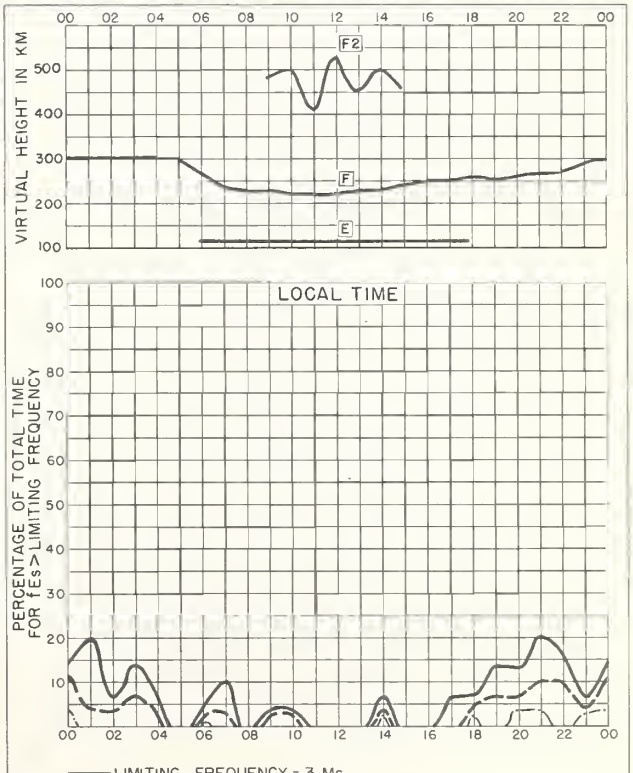


Fig. 52. OTTAWA, CANADA SEPTEMBER 1958

NBS 490

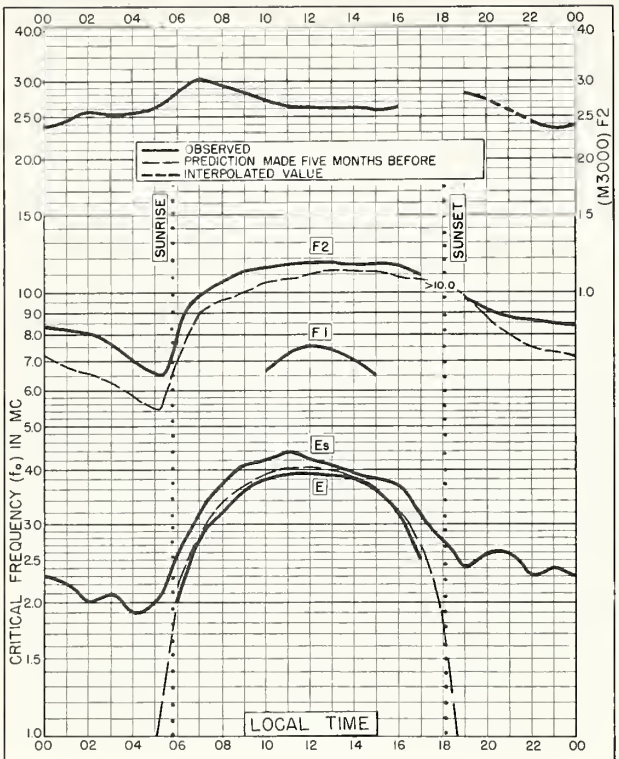


Fig. 53. TORTOSA, SPAIN
40.8°N, 0.5°E SEPTEMBER 1958

NBS 503

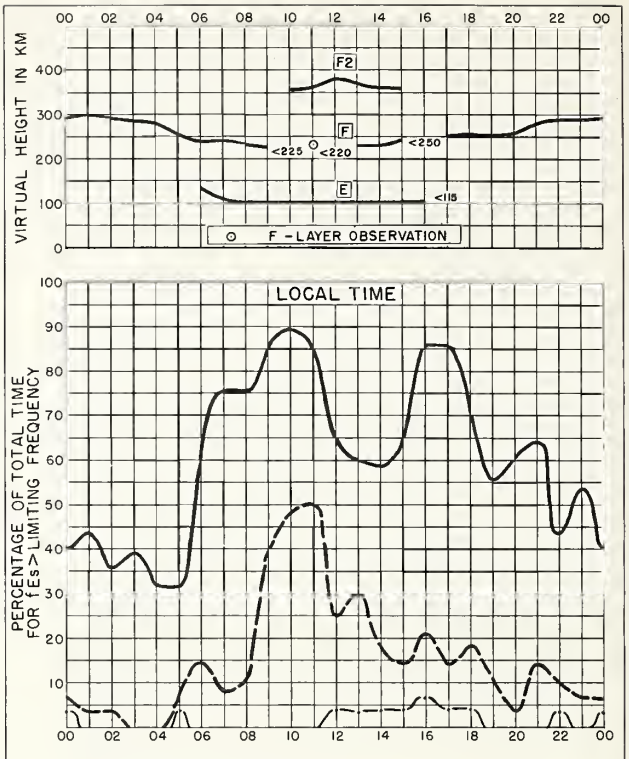


Fig. 54. TORTOSA, SPAIN SEPTEMBER 1958

NBS 490

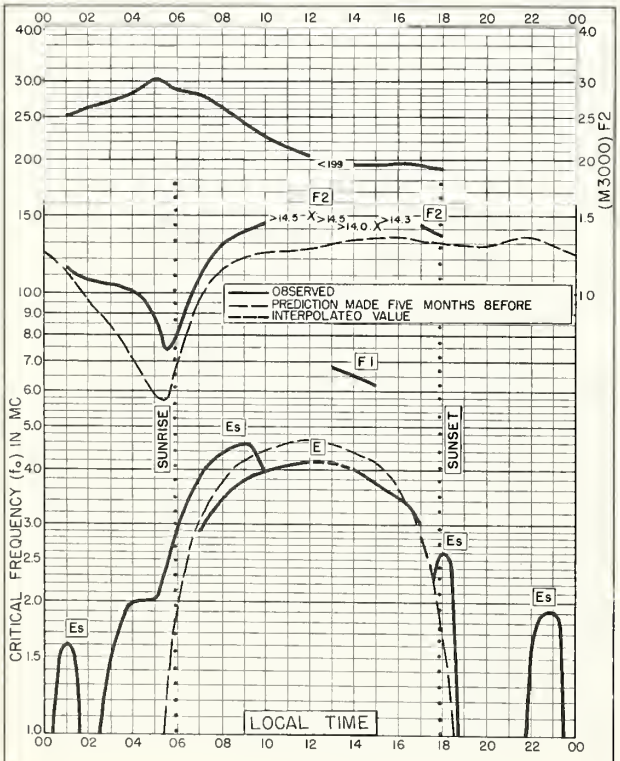


Fig. 55. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E SEPTEMBER 1958

NBS 503

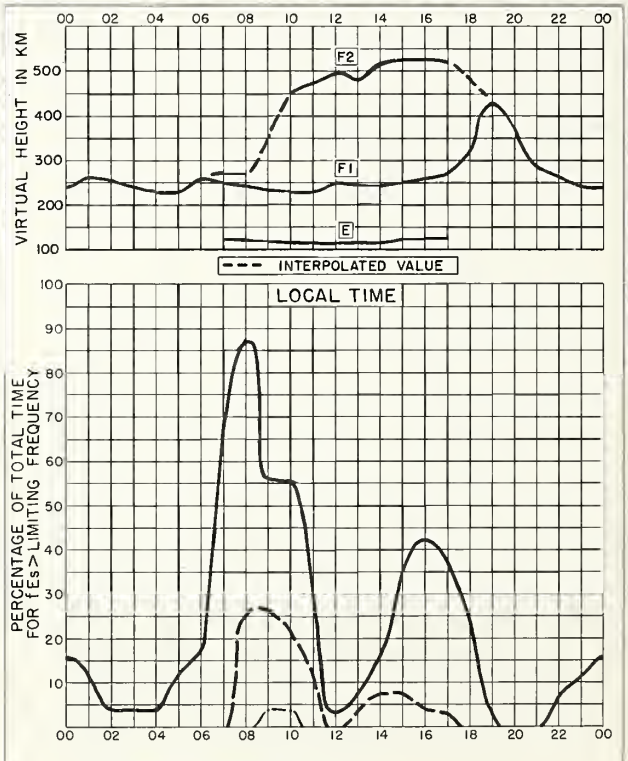


Fig. 56. BUNIA, BELGIAN CONGO SEPTEMBER 1958

NBS 490

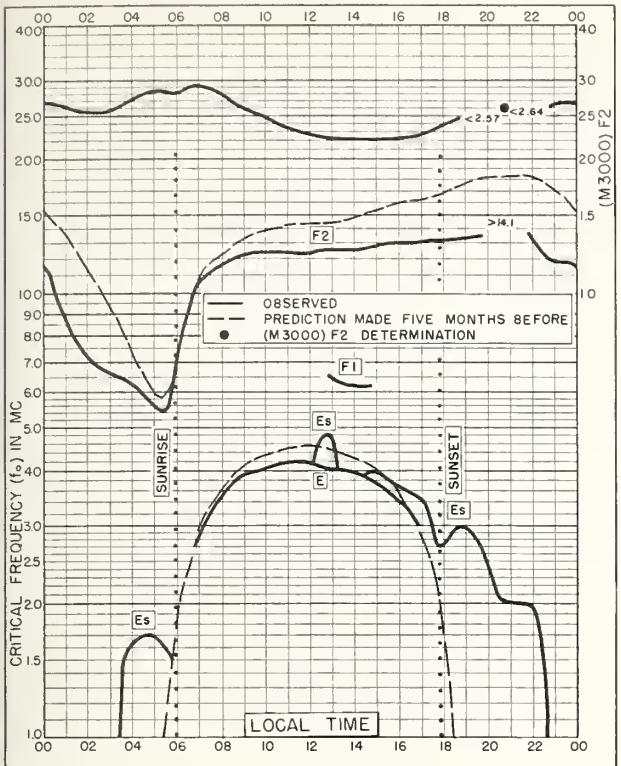
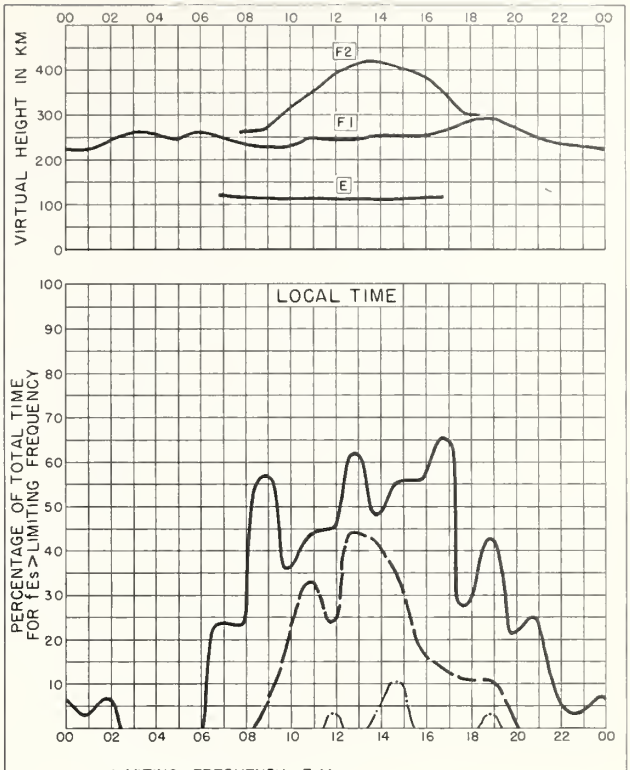


Fig. 57. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E SEPTEMBER 1958

NBS 503



SEPTEMBER 1958

Fig. 58. ELISABETHVILLE, BELGIAN CONGO

NBS 490

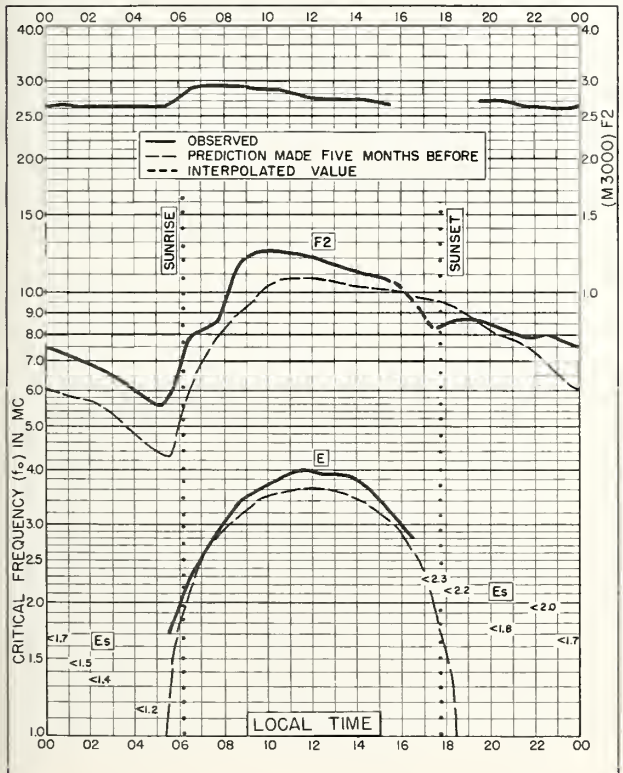
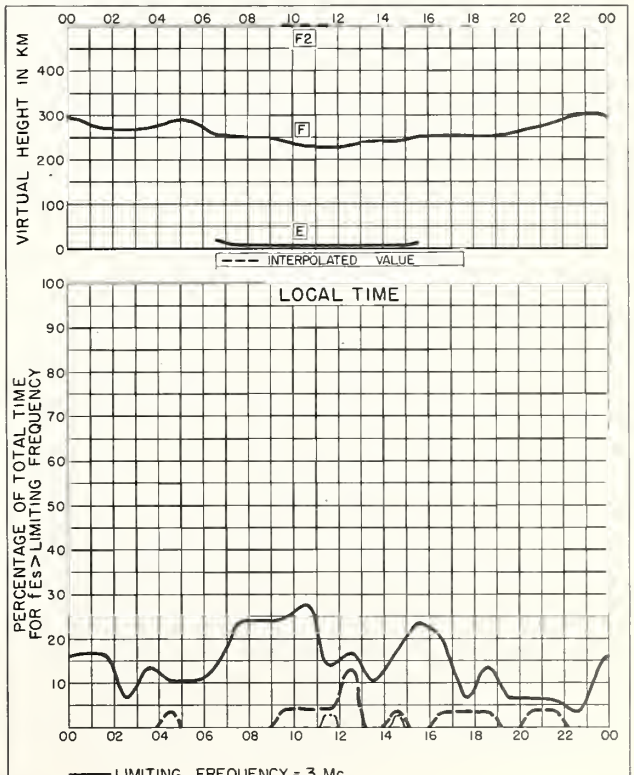


Fig. 59. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E SEPTEMBER 1958

NBS 503



SEPTEMBER 1958

Fig. 60. CHRISTCHURCH, NEW ZEALAND

NBS 490

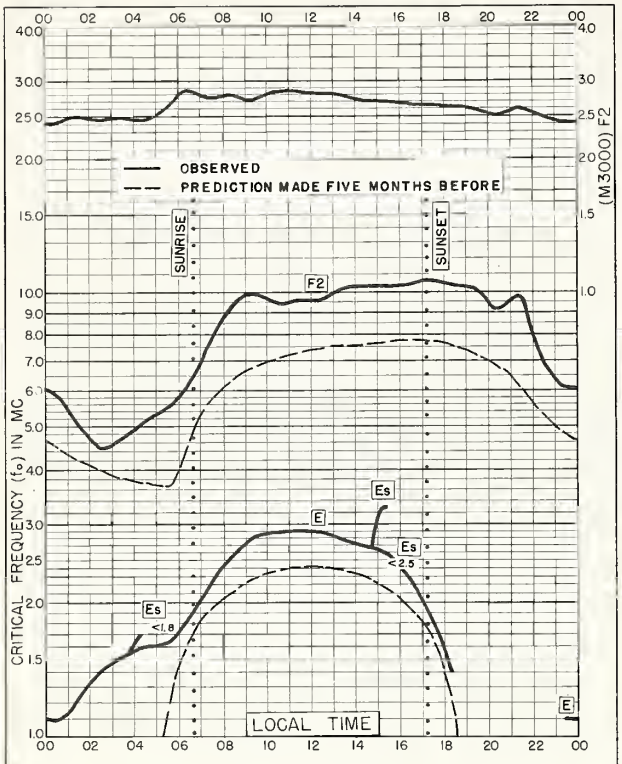


Fig. 61. CAPE HALLETT
72.3°S, 170.3°E SEPTEMBER 1958

NBS 503

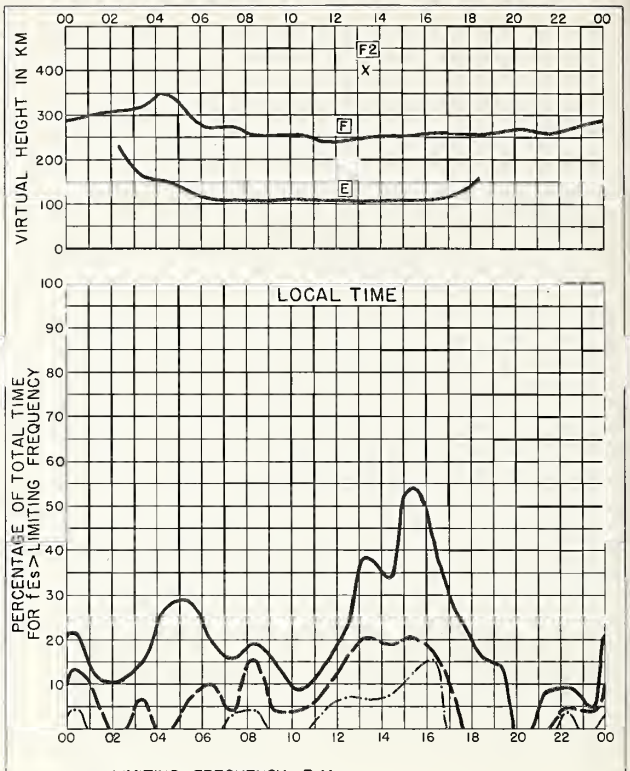


Fig. 62. CAPE HALLETT SEPTEMBER 1958

NBS 490

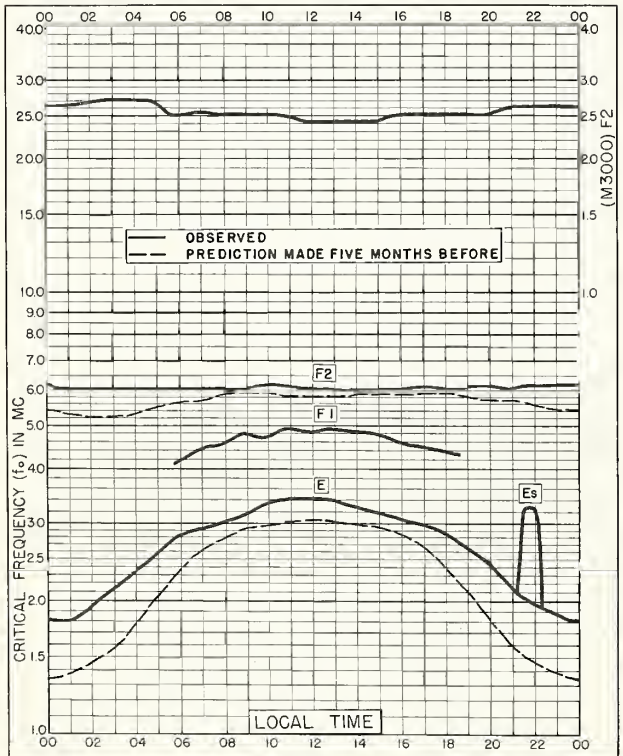


Fig. 63. RESOLUTE BAY, CANADA
74.7°N, 94.9°W AUGUST 1958

NBS 503

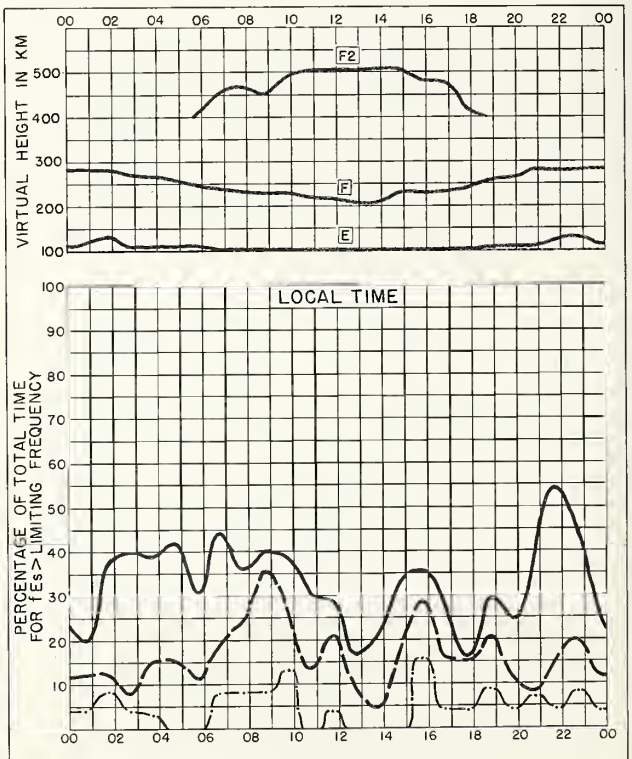


Fig. 64. RESOLUTE BAY, CANADA AUGUST 1958

NBS 490

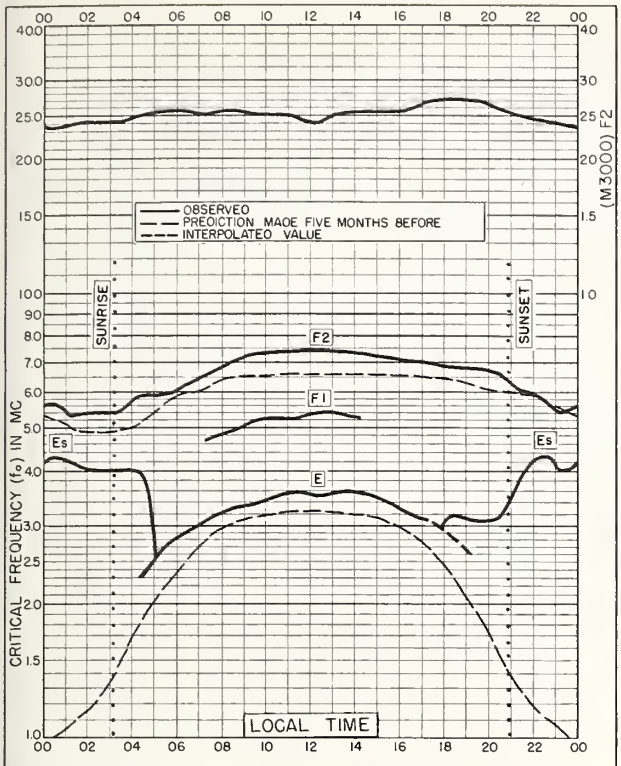


Fig. 65. TROMSO, NORWAY
69.7°N, 19.0°E AUGUST 1958

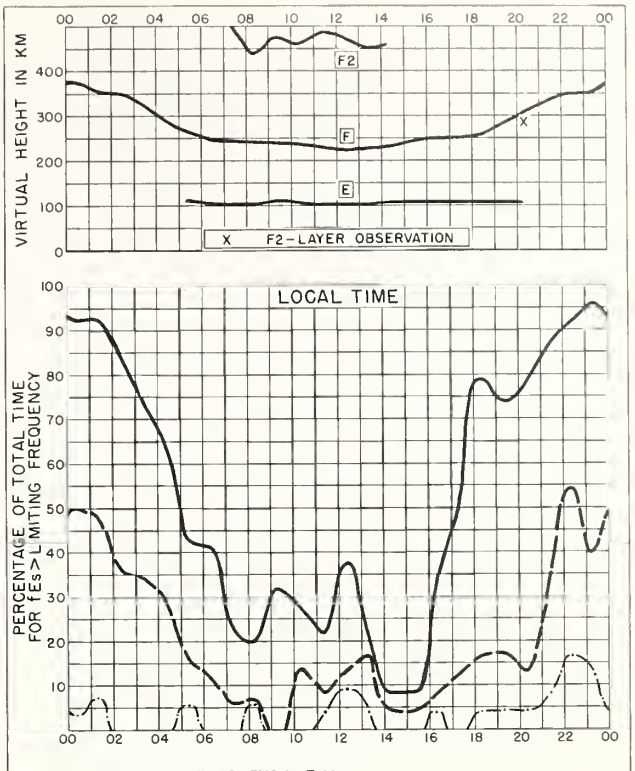


Fig. 66. TROMSO, NORWAY AUGUST 1958

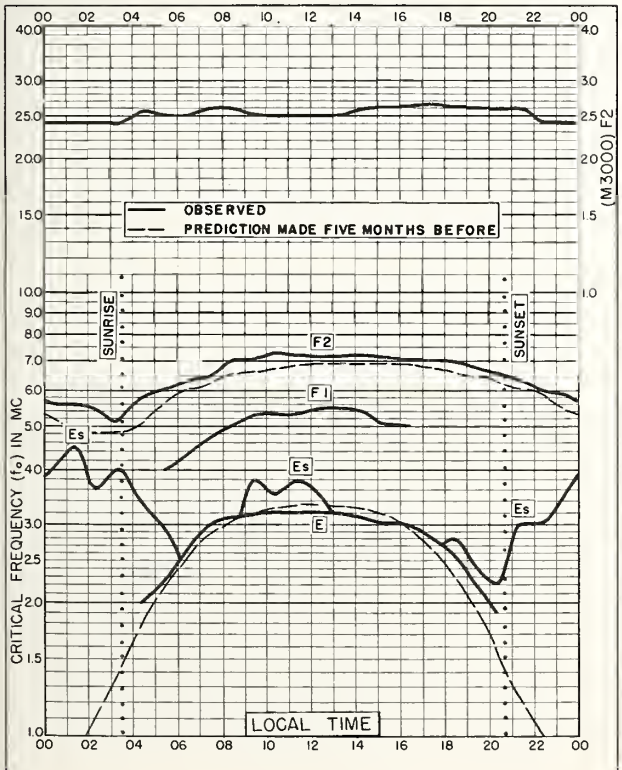


Fig. 67. KIRUNA, SWEDEN
67.8°N, 20.3°E AUGUST 1958

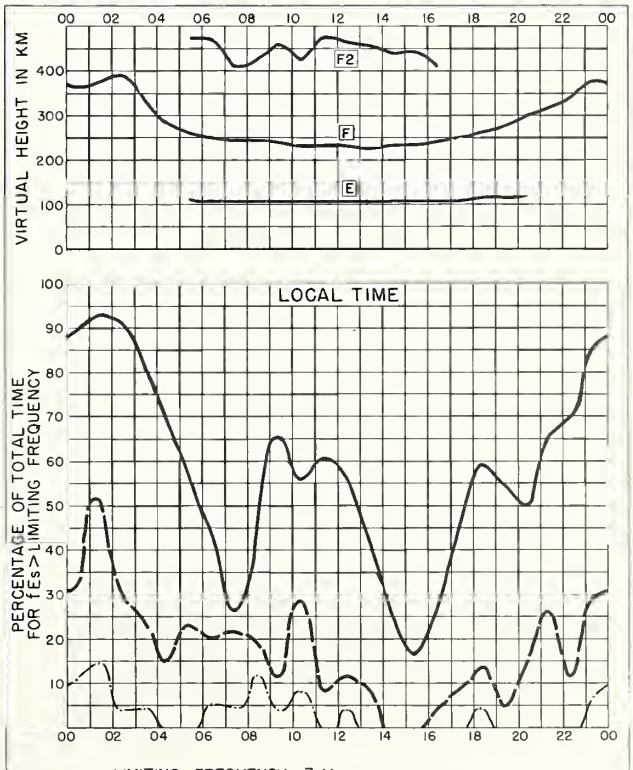


Fig. 68. KIRUNA, SWEDEN AUGUST 1958

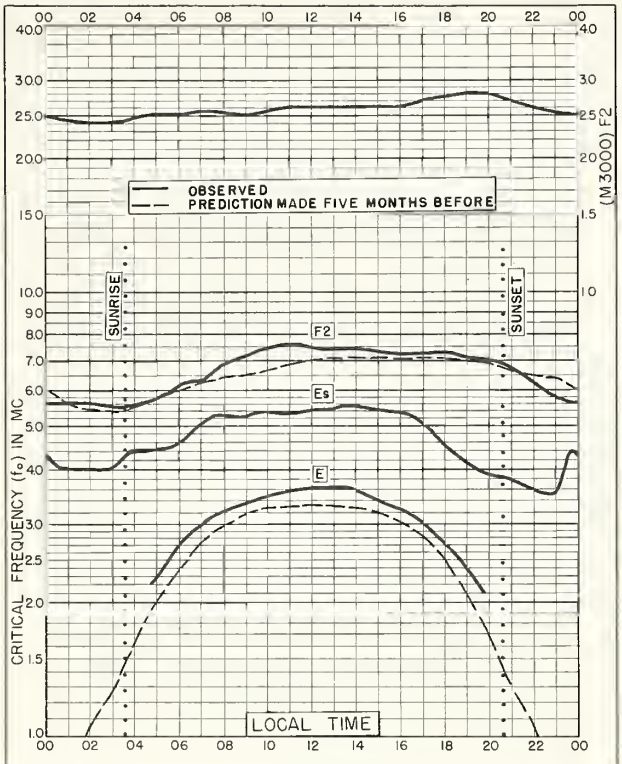


Fig. 69. SODANKYLA, FINLAND
67.4°N, 26.6°E AUGUST 1958

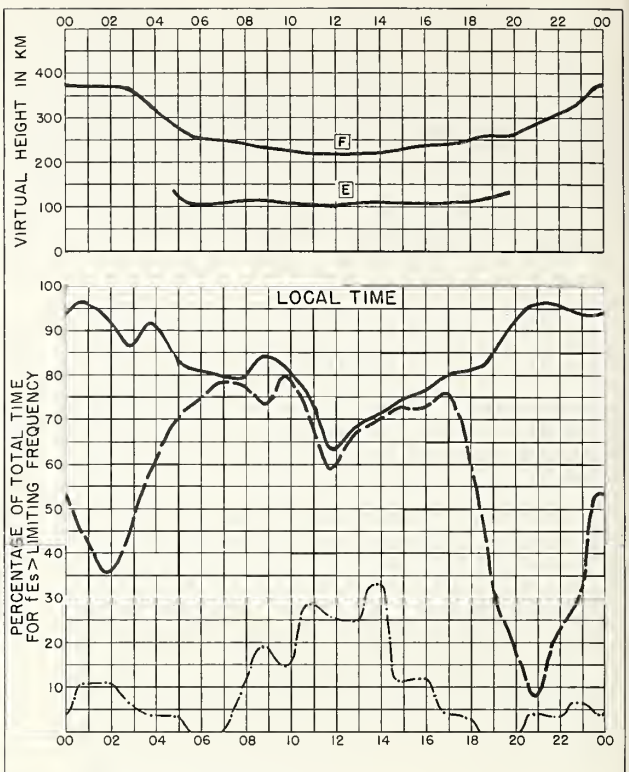


Fig. 70. SODANKYLA, FINLAND AUGUST 1958

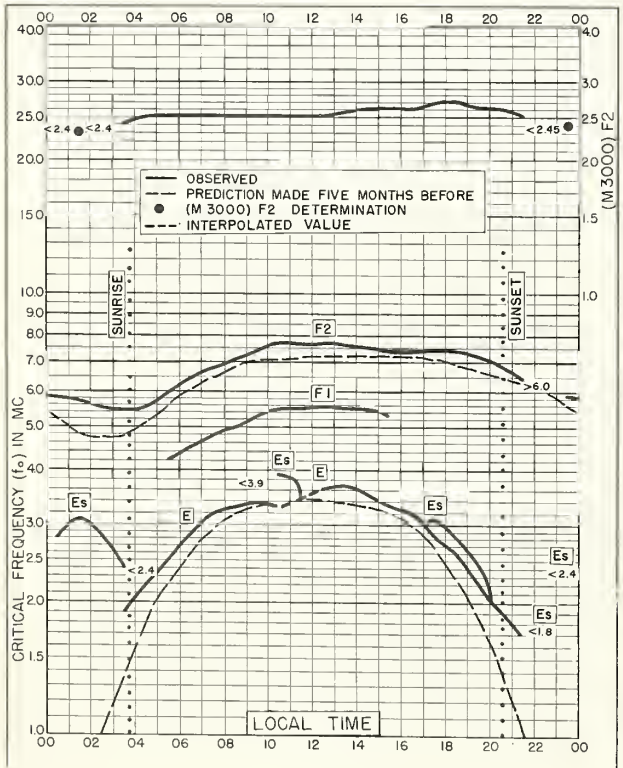


Fig. 71. LULEA, SWEDEN
65.6°N, 22.1°E AUGUST 1958

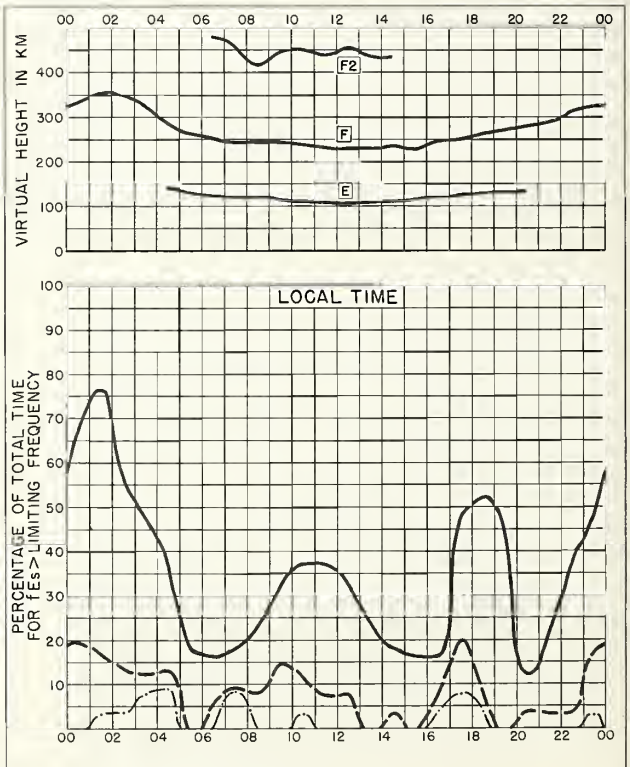


Fig. 72. LULEA, SWEDEN AUGUST 1958

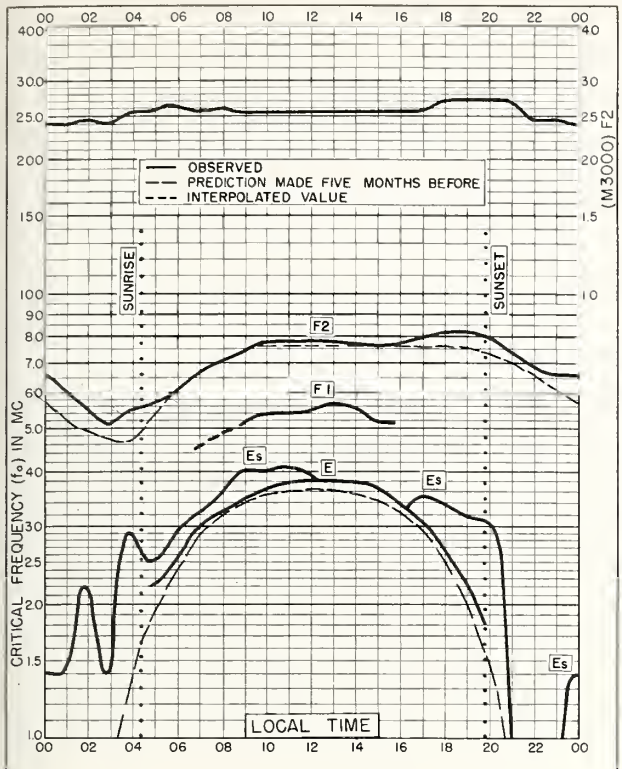


Fig. 73. OSLO, NORWAY
60.0°N, 11.1°E AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503

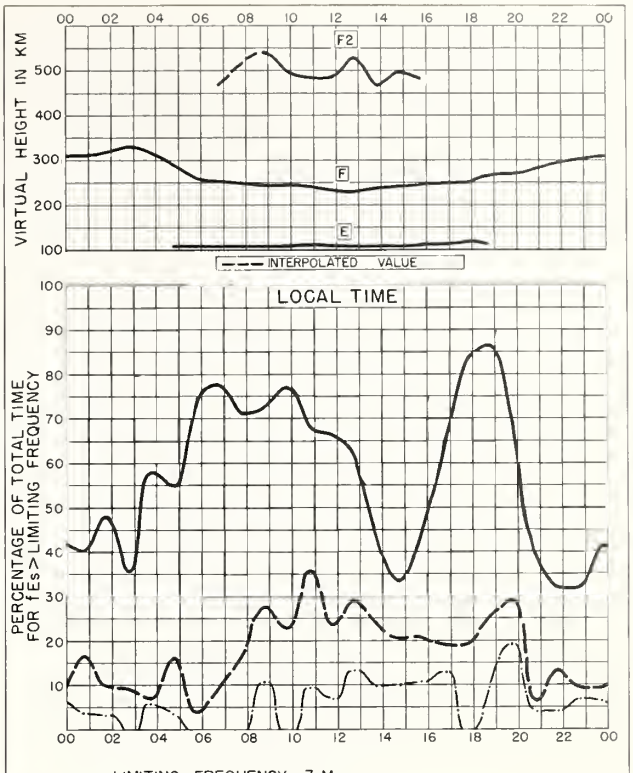


Fig. 74. OSLO, NORWAY AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 490

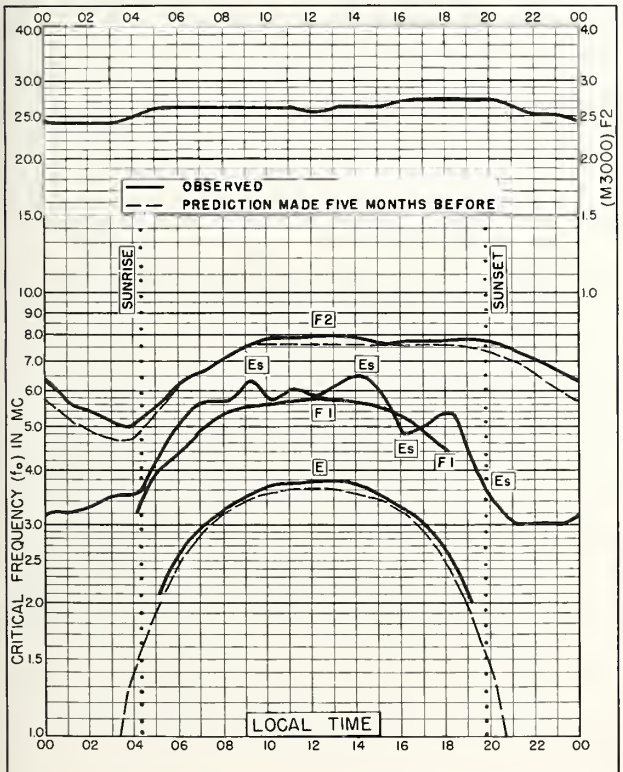


Fig. 75. UPSALA, SWEDEN
59.8°N, 17.6°E AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503

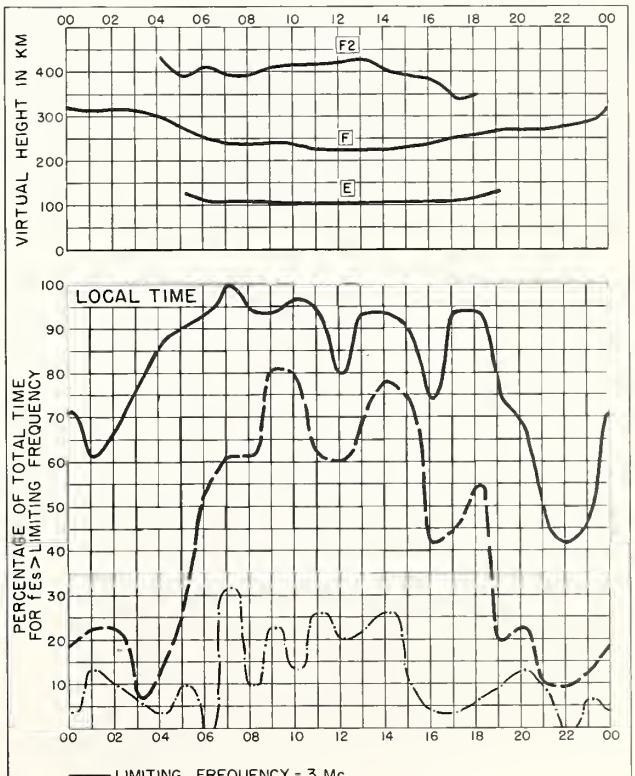


Fig. 76. UPSALA, SWEDEN AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 490

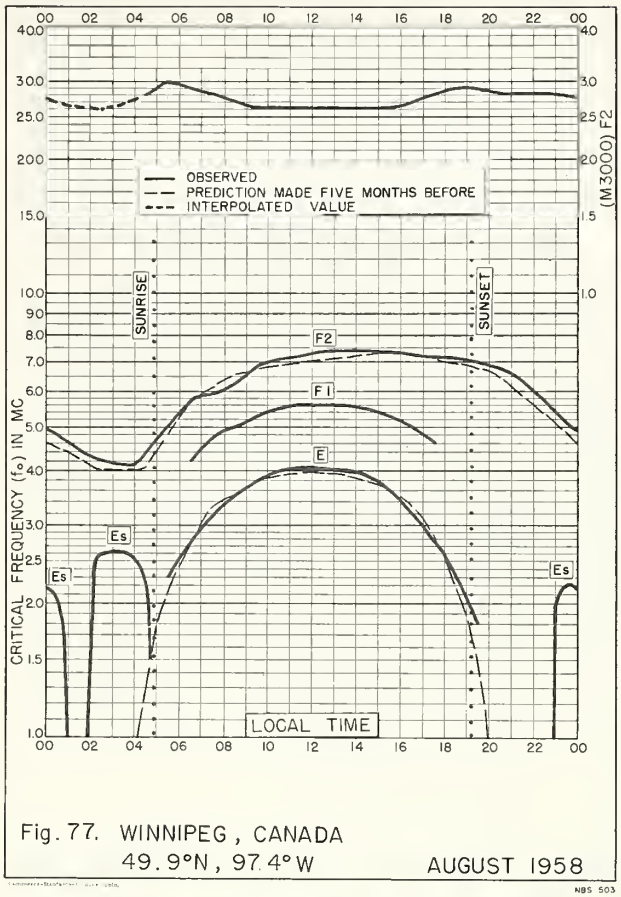


Fig. 77. WINNIPEG, CANADA
49.9°N, 97.4°W AUGUST 1958

NBS 503

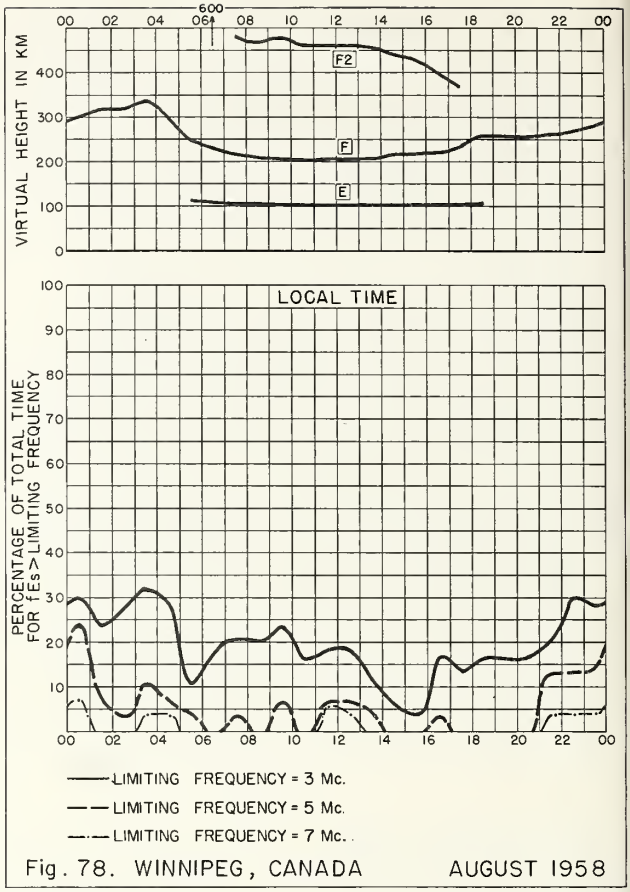


Fig. 78. WINNIPEG, CANADA AUGUST 1958

NBS 490

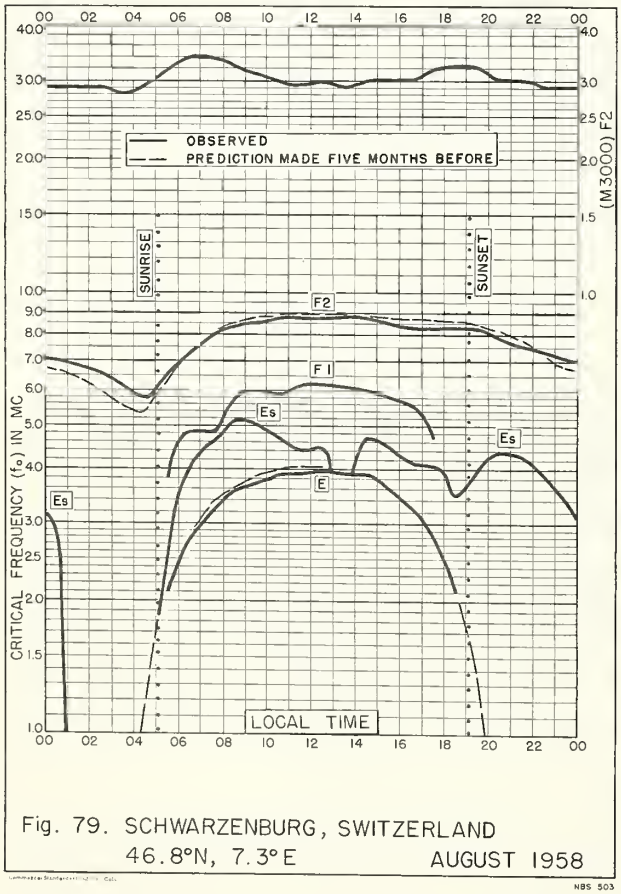


Fig. 79. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E AUGUST 1958

NBS 503

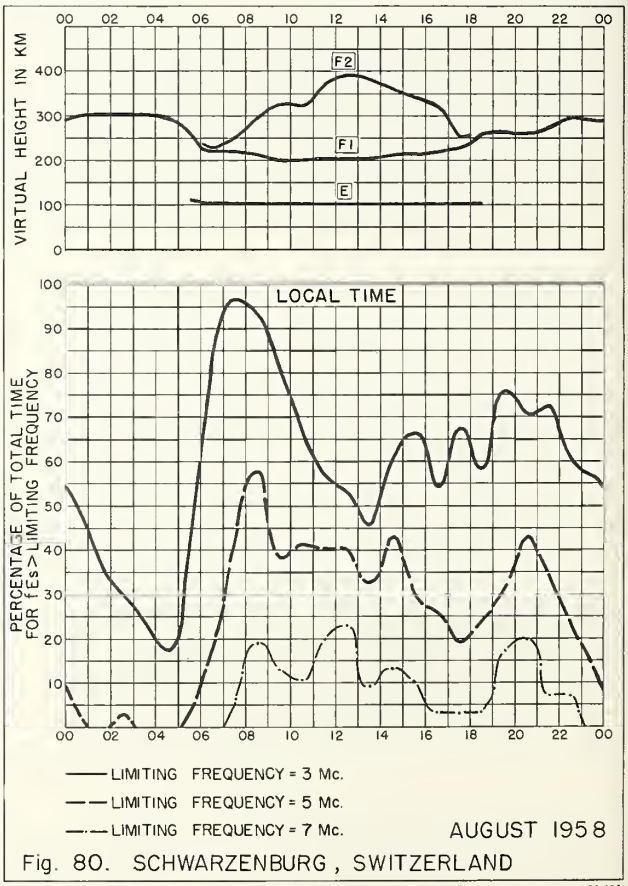


Fig. 80. SCHWARZENBURG, SWITZERLAND AUGUST 1958

NBS 490

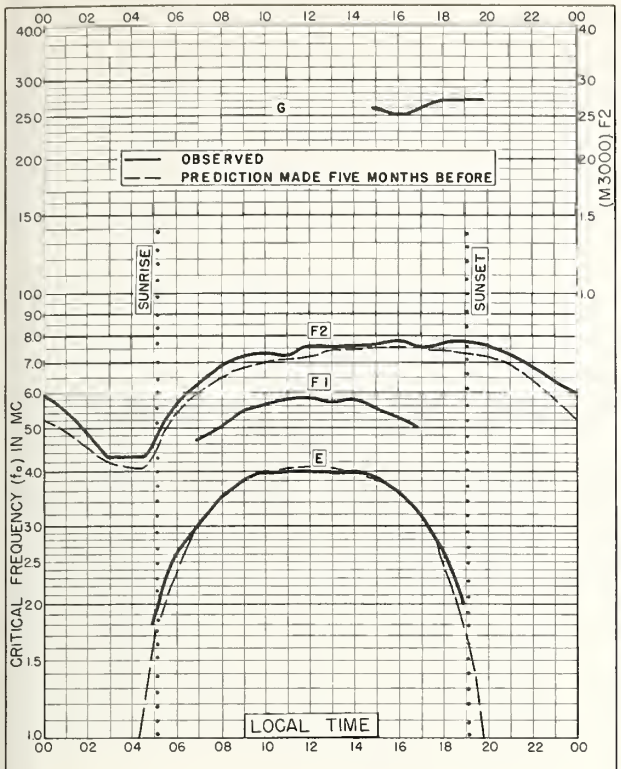


Fig. 81. OTTAWA, CANADA
45.4°N, 75.9°W AUGUST 1958

NBS 503

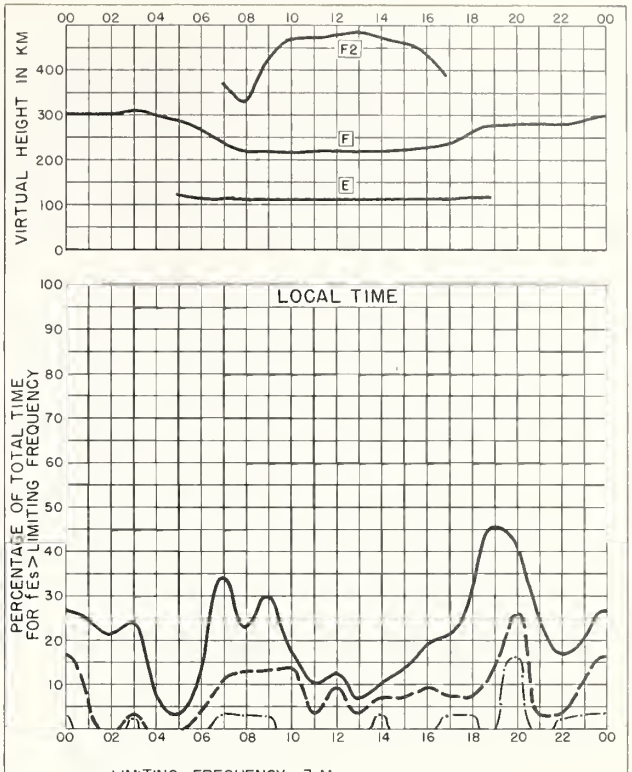


Fig. 82. OTTAWA, CANADA AUGUST 1958

NBS 490

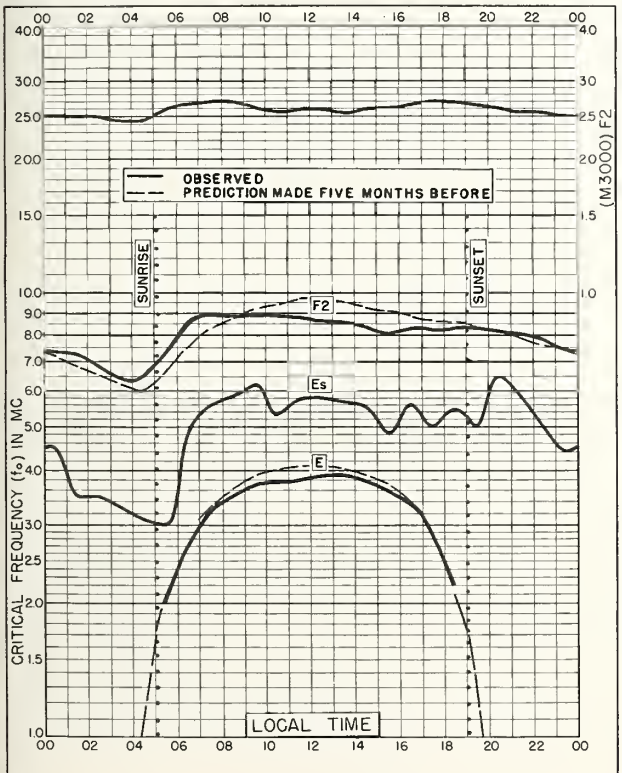


Fig. 83. WAKKANAI, JAPAN
45.4°N, 141.7°E AUGUST 1958

NBS 503

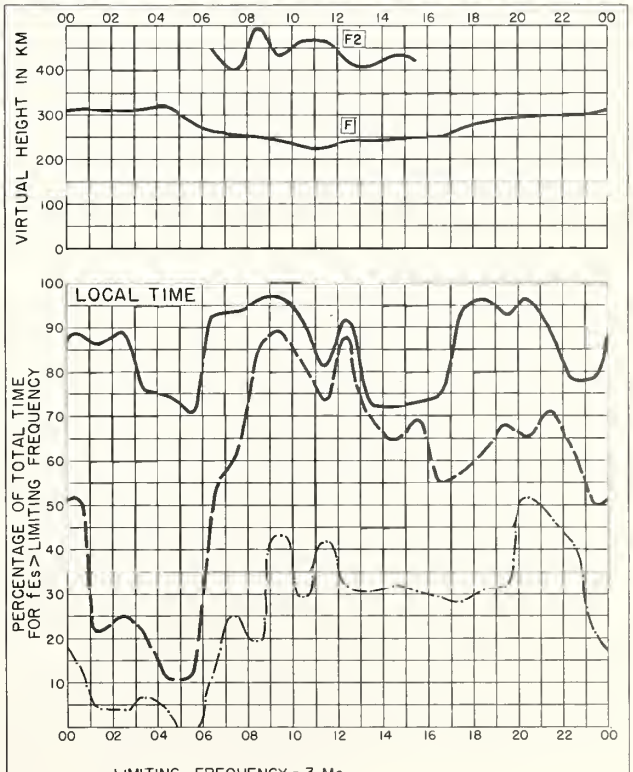


Fig. 84. WAKKANAI, JAPAN AUGUST 1958

NBS 490

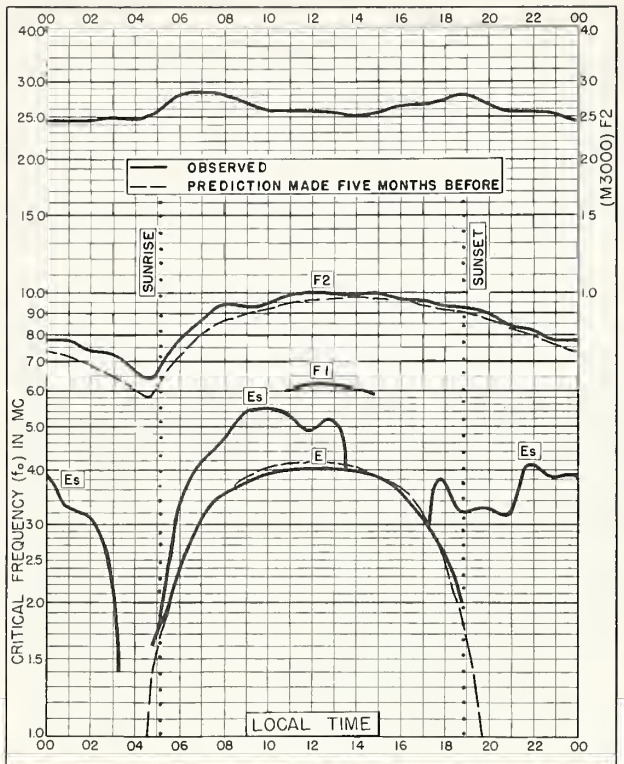


Fig. 85. ROME ITALY
41.8°N, 12.5°E AUGUST 1958

NBS 503

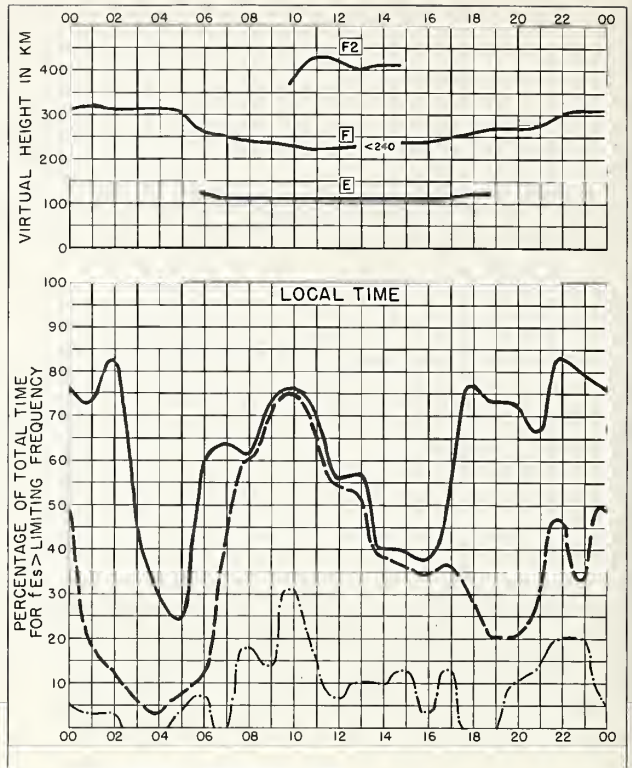


Fig. 86. ROME ITALY AUGUST 1958

NBS 490

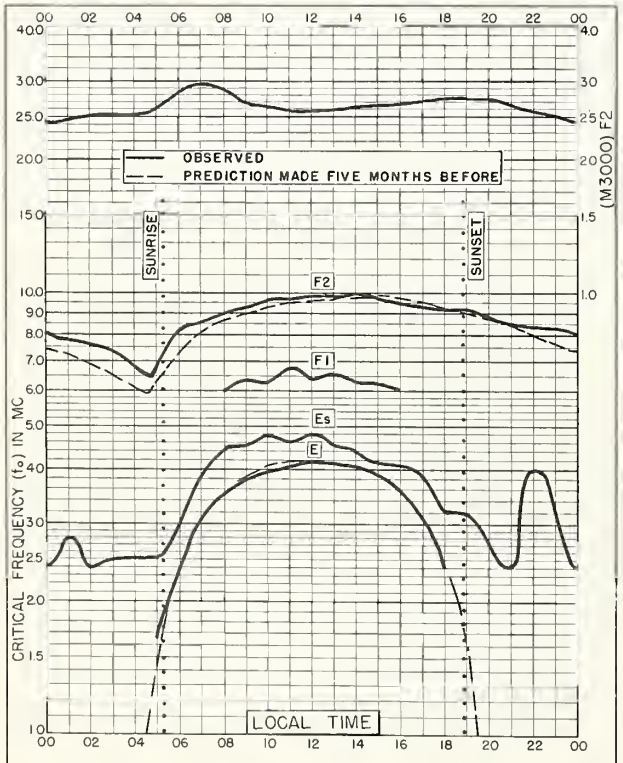


Fig. 87. TORTOSA, SPAIN
40.8°N, 0.5°E AUGUST 1958

NBS 503

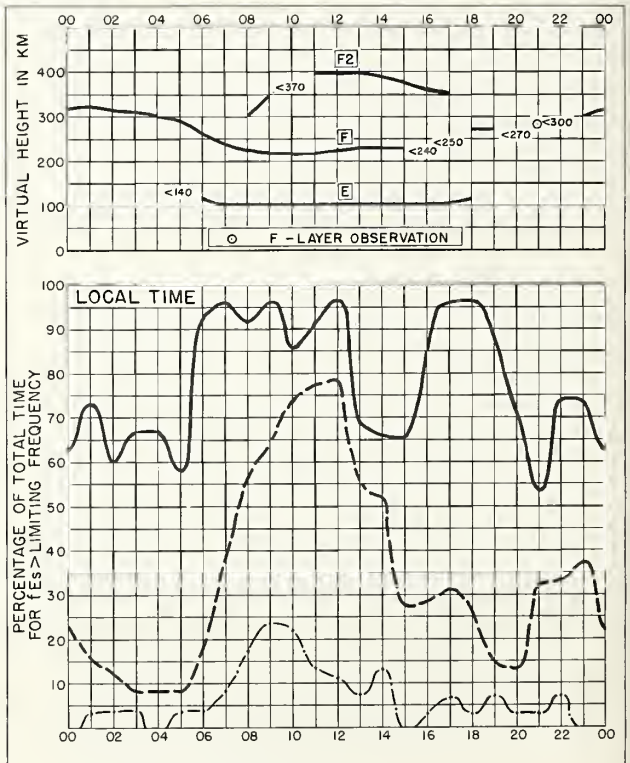


Fig. 88. TORTOSA, SPAIN AUGUST 1958

NBS 490

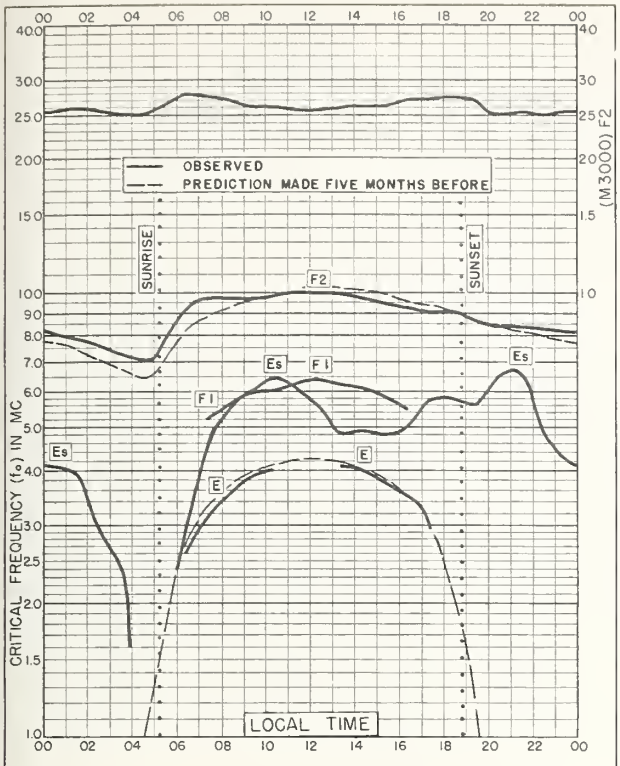


Fig. 89. AKITA, JAPAN
39.7°N, 140.1°E AUGUST 1958

NBS 503

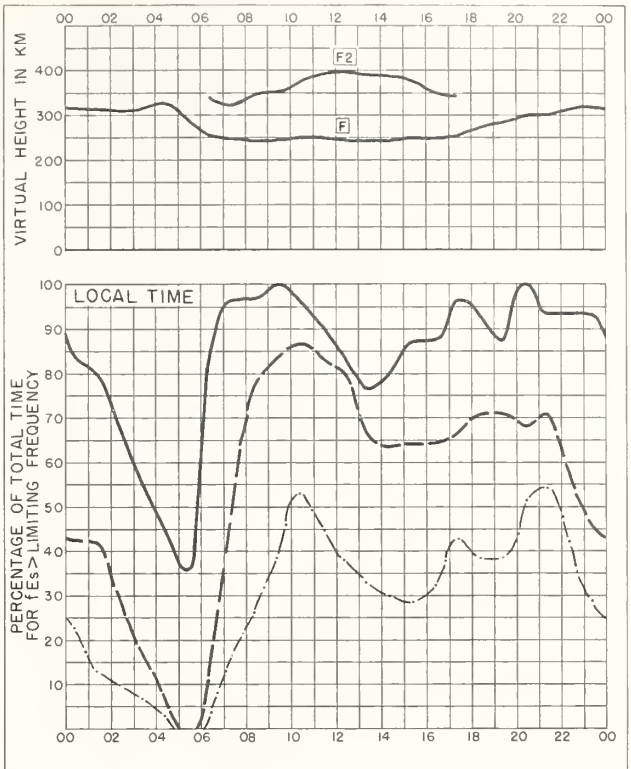


Fig. 90. AKITA, JAPAN AUGUST 1958

NBS 490

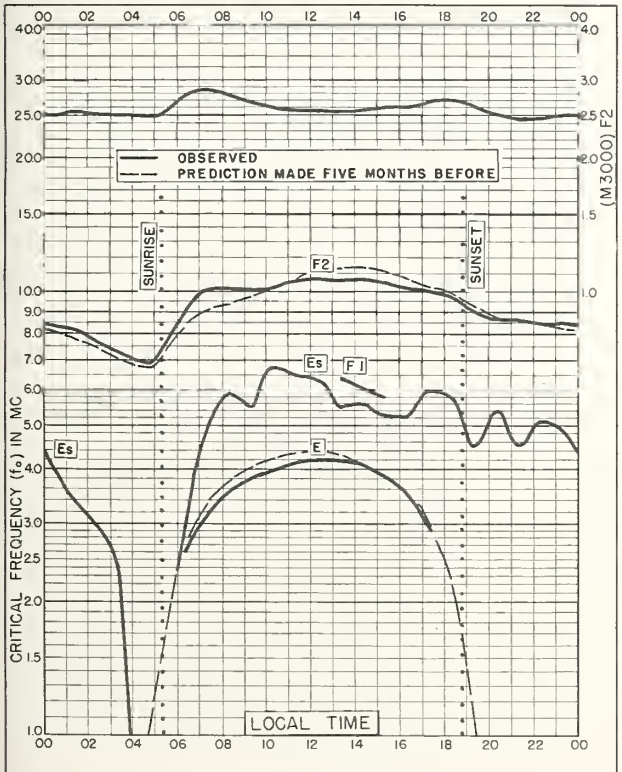


Fig. 91. TOKYO, JAPAN
35.7°N, 139.5°E AUGUST 1958

NBS 503

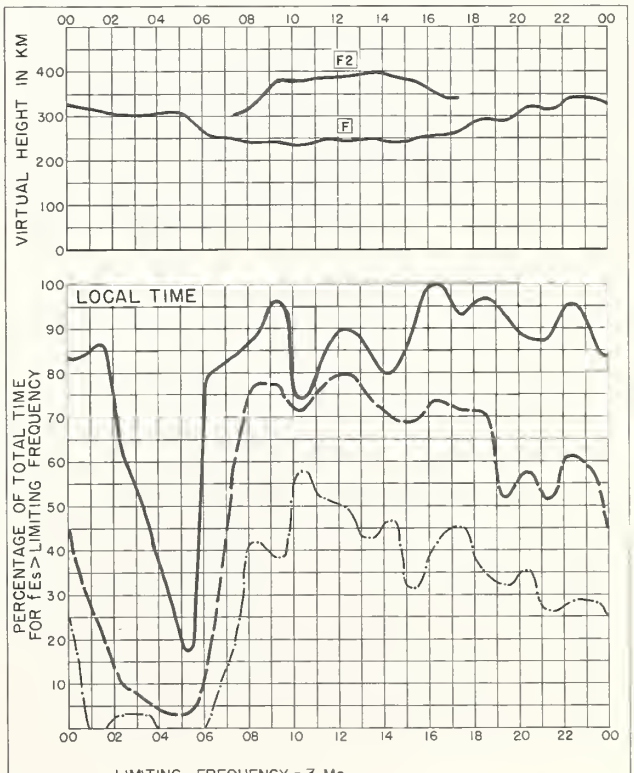


Fig. 92. TOKYO, JAPAN AUGUST 1958

NBS 490

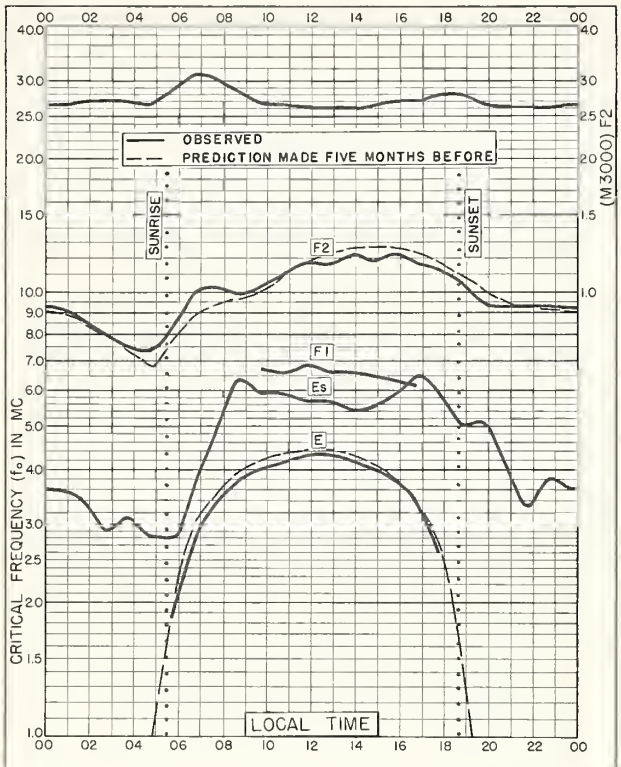


Fig. 93. YAMAGAWA, JAPAN
31.2°N, 130.6°E AUGUST 1958

NBS 503

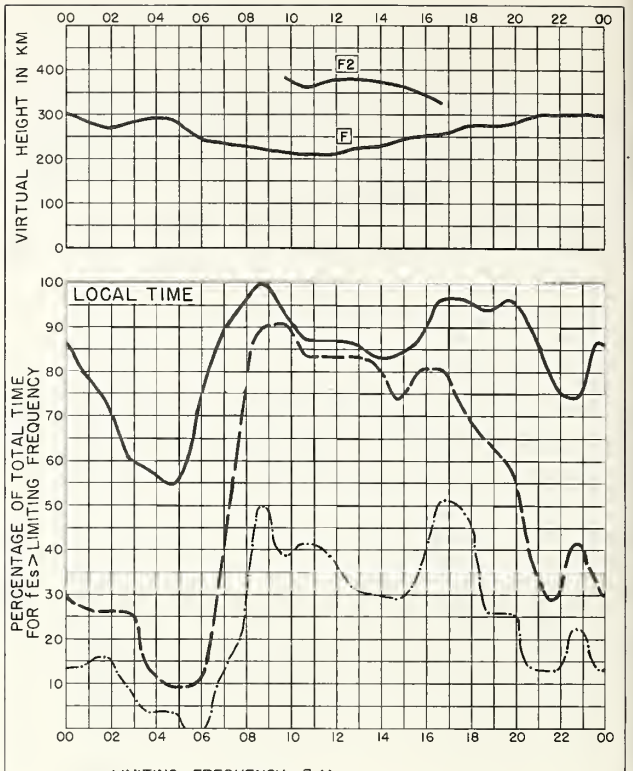


Fig. 94. YAMAGAWA, JAPAN AUGUST 1958

NBS 490

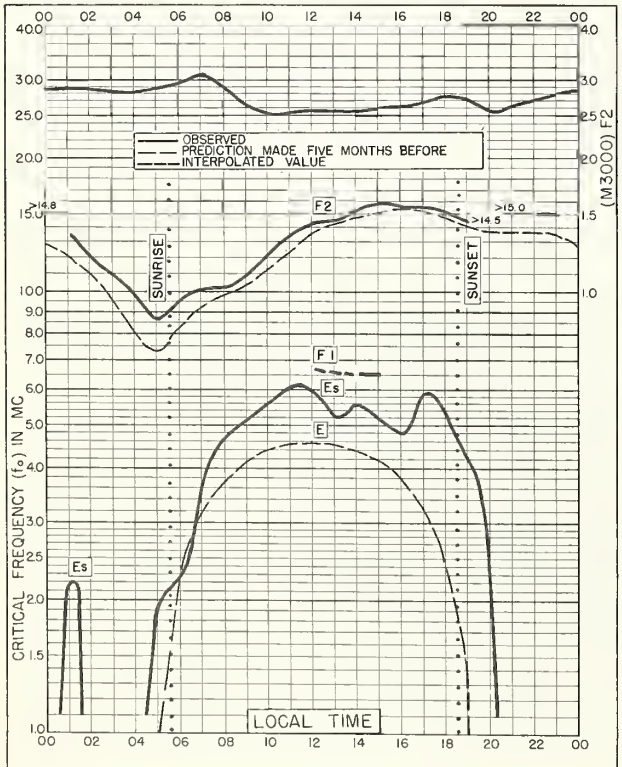


Fig. 95. FORMOSA, CHINA
25.0°N, 121.5°E AUGUST 1958

NBS 503

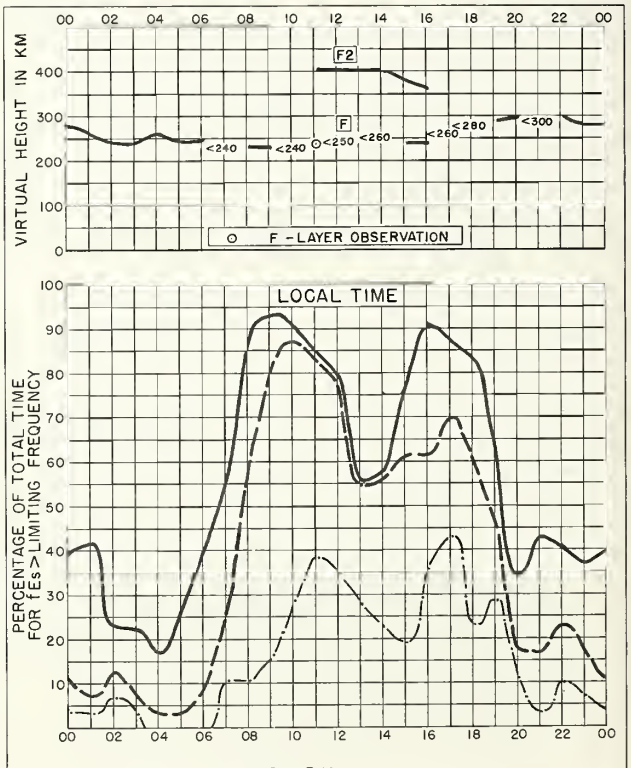


Fig. 96. FORMOSA, CHINA AUGUST 1958

NBS 490

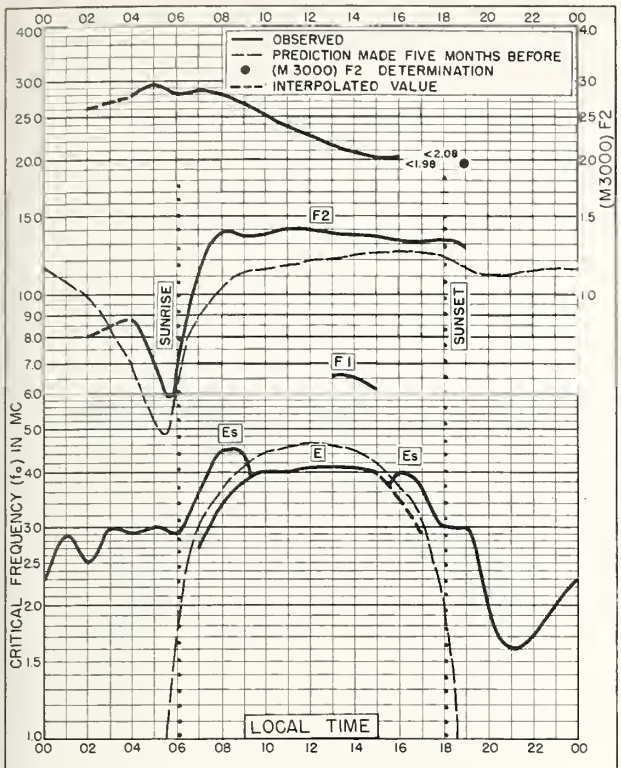


Fig. 97. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503

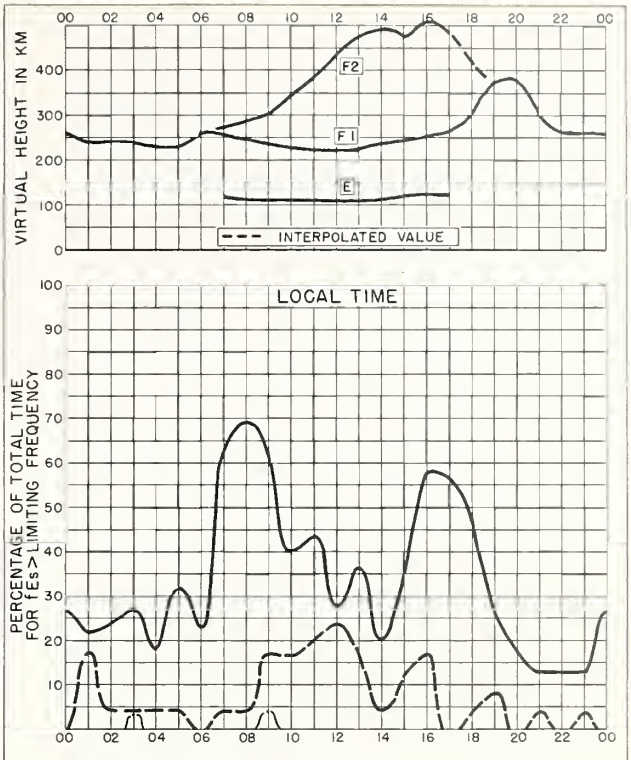


Fig. 98. BUNIA, BELGIAN CONGO AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 490

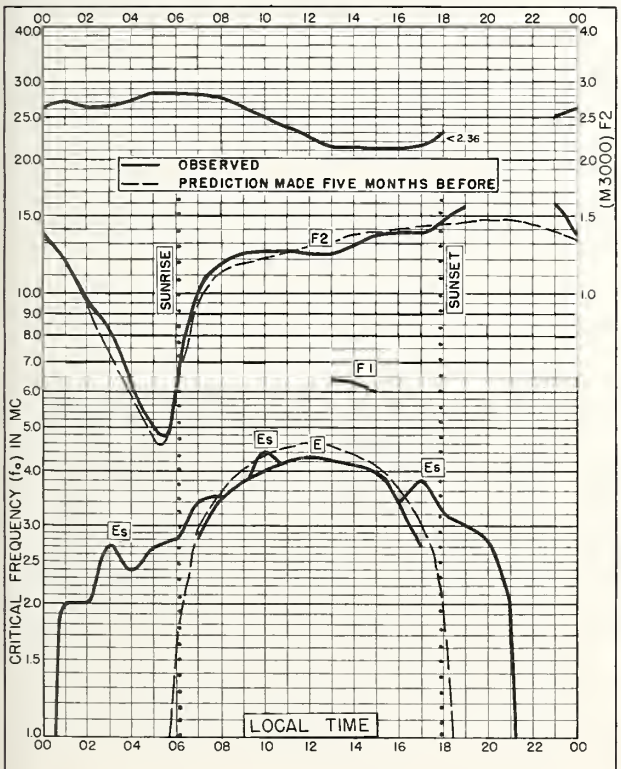


Fig. 99. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503

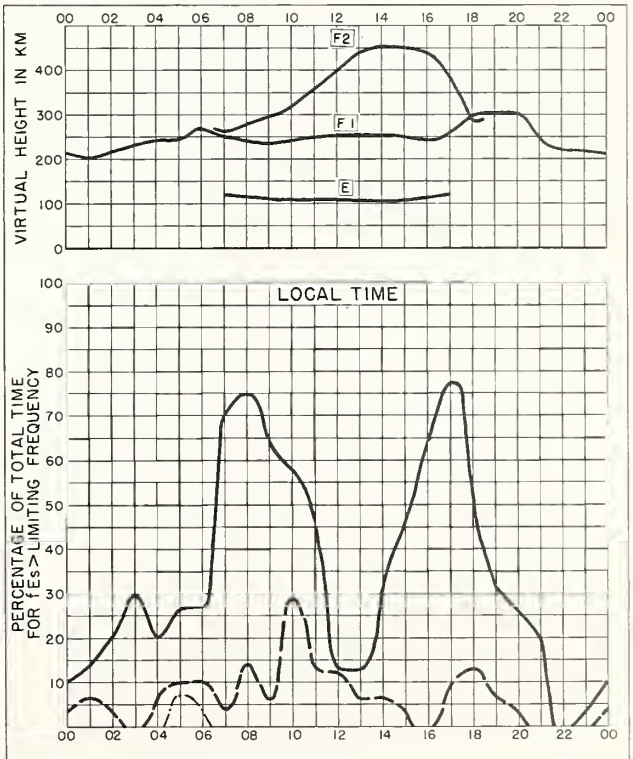


Fig. 100. LEOPOLDVILLE, BELGIAN CONGO AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 490

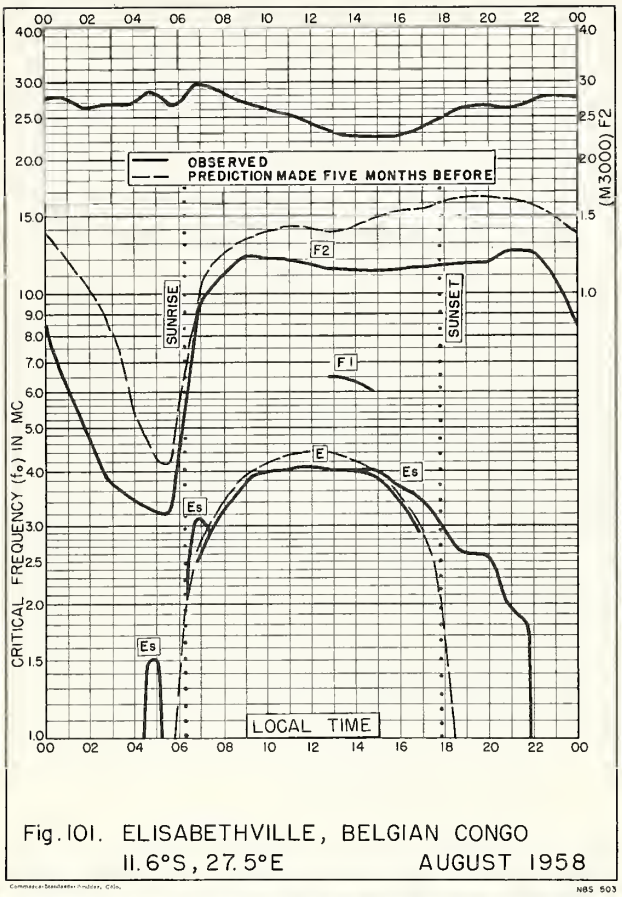


Fig. 101. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E AUGUST 1958

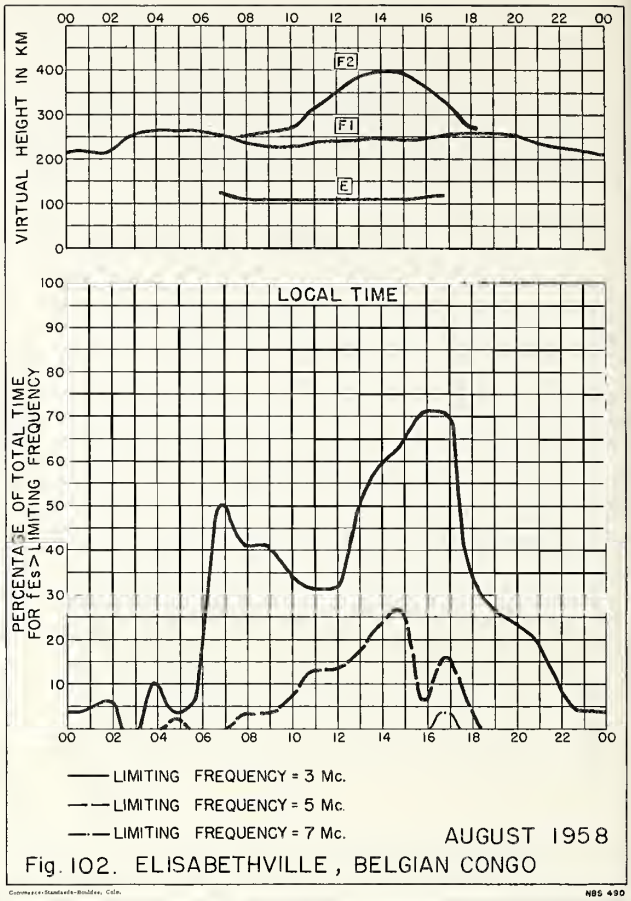


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Fig. 102. ELISABETHVILLE, BELGIAN CONGO

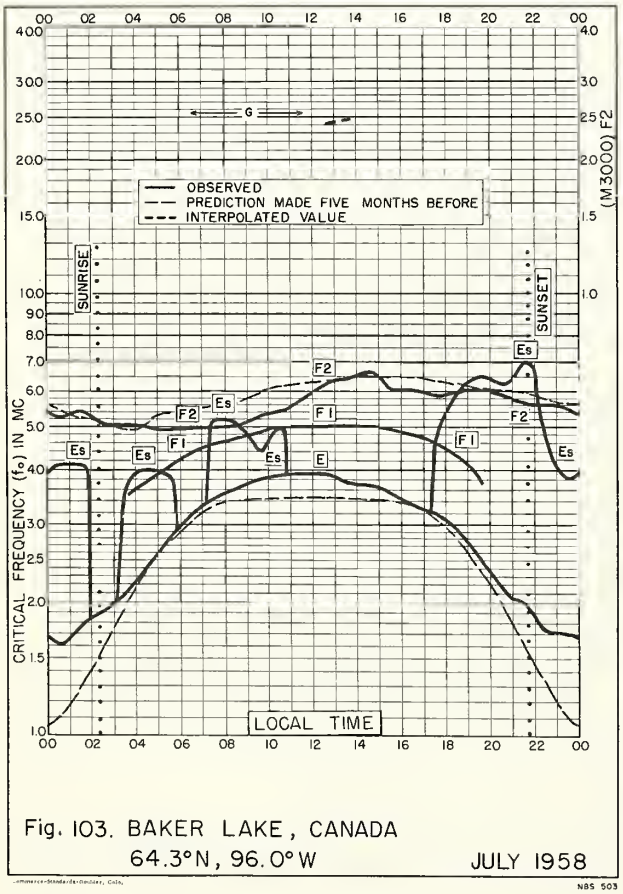


Fig. 103. BAKER LAKE, CANADA
64.3°N, 96.0°W JULY 1958

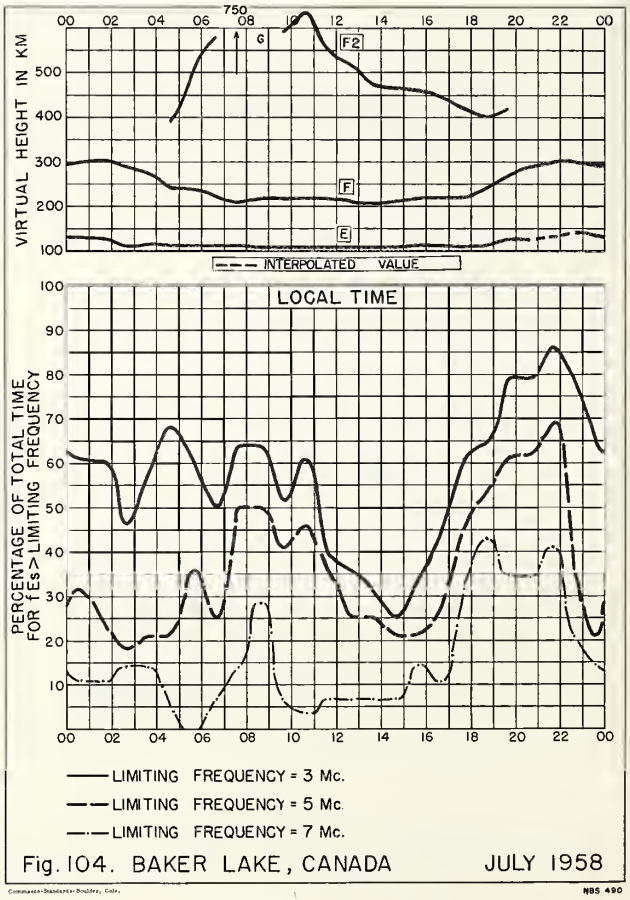


Fig. 104. BAKER LAKE, CANADA JULY 1958

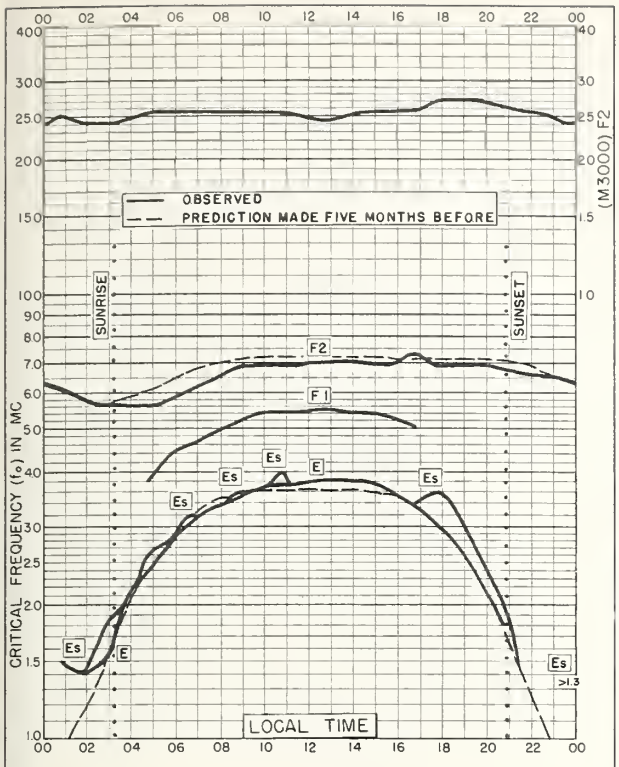


Fig. 105. OSLO, NORWAY
60.0°N, 11.1°E JULY 1958

NBS 503

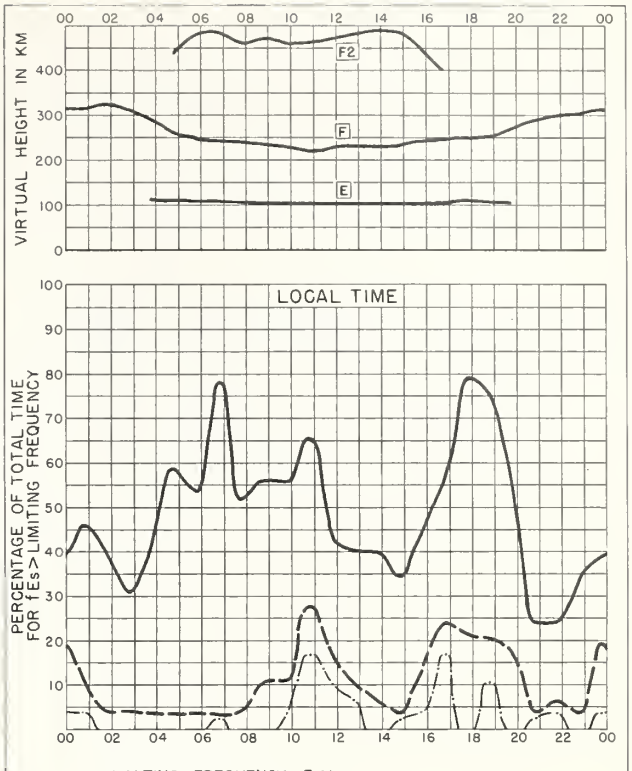


Fig. 106. OSLO, NORWAY JULY 1958

NBS 490

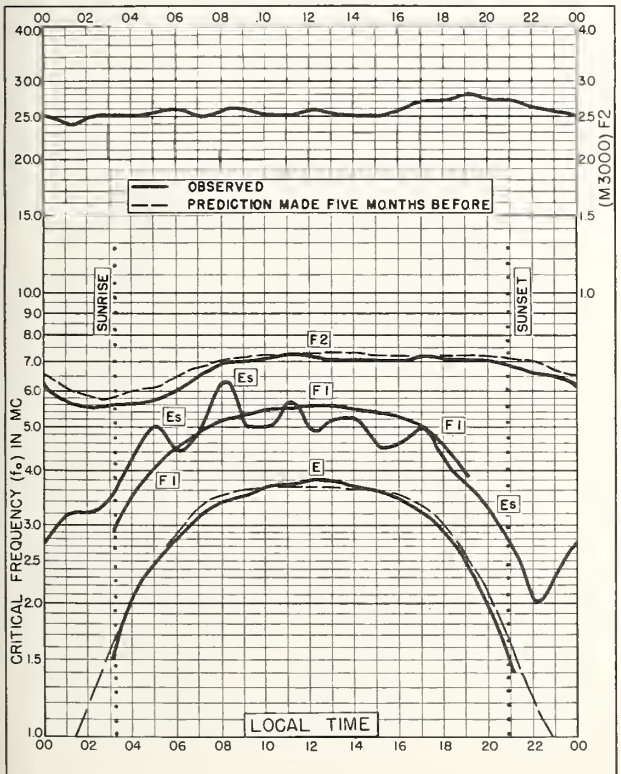


Fig. 107. UPSALA, SWEDEN
59.8°N, 17.6°E JULY 1958

NBS 503

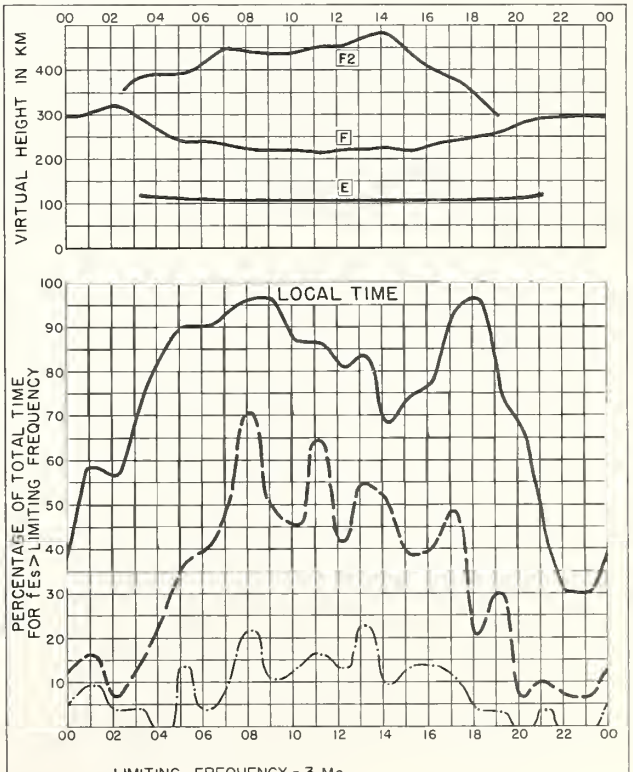


Fig. 108. UPSALA, SWEDEN JULY 1958

NBS 490

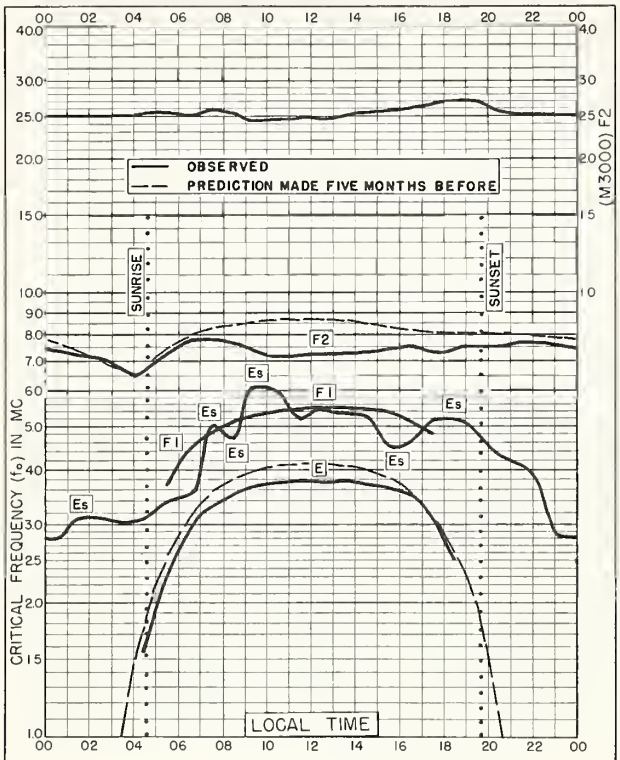


Fig. 109. WAKKANAI, JAPAN
45.4°N, 141.7°E JULY 1958

NBS 503

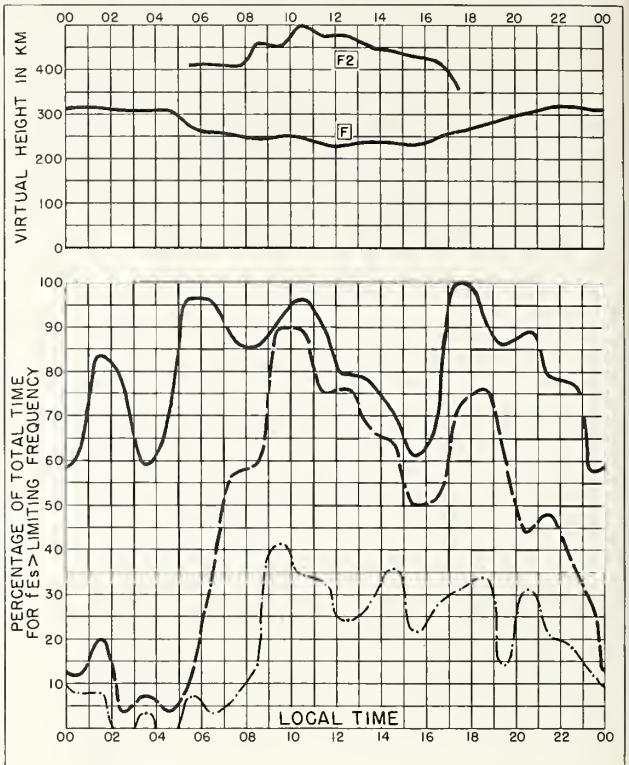


Fig. 110. WAKKANAI, JAPAN JULY 1958

NBS 490

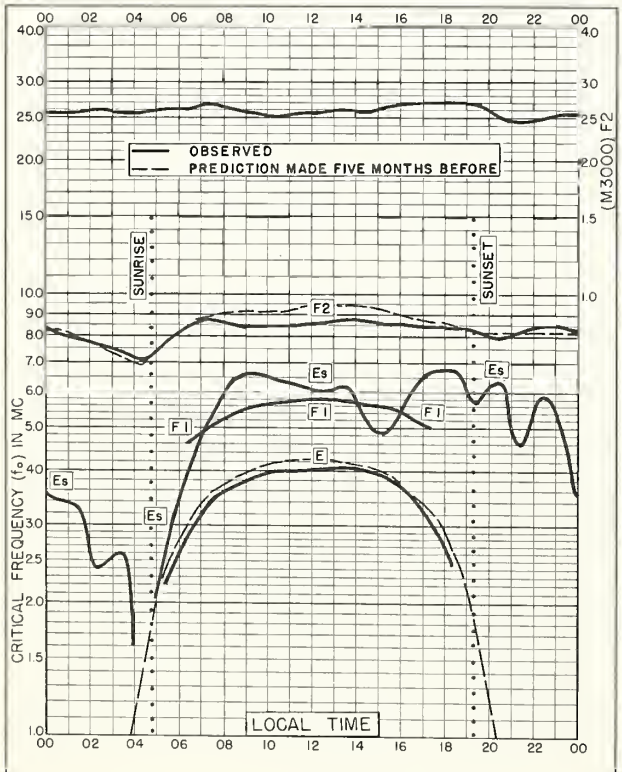


Fig. 111. AKITA, JAPAN
39.7°N, 140.1°E JULY 1958

NBS 503

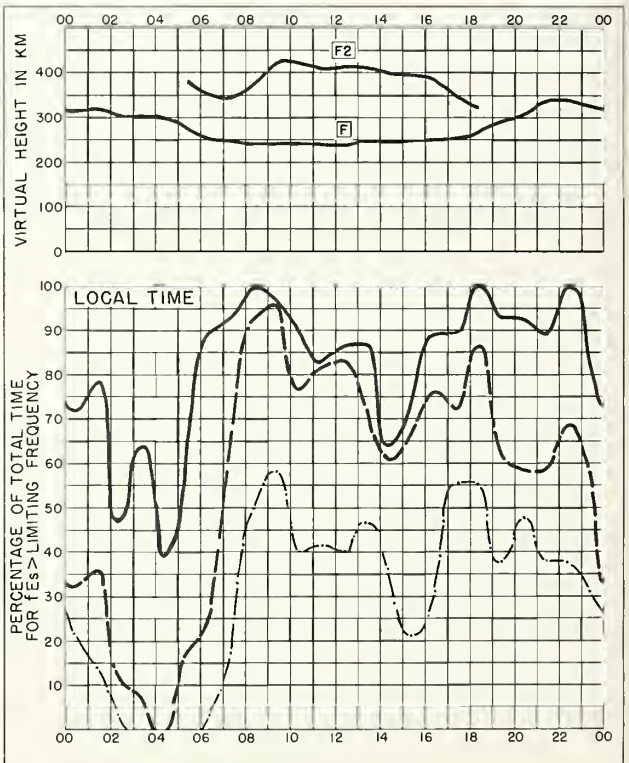


Fig. 112. AKITA, JAPAN JULY 1958

NBS 490

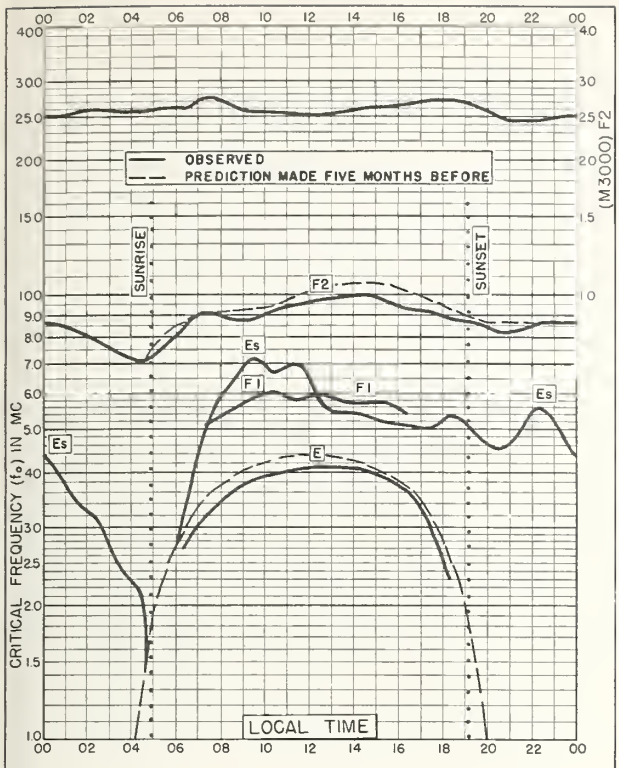


Fig. 113. TOKYO, JAPAN
35.7°N, 139.5°E JULY 1958

NBS 503

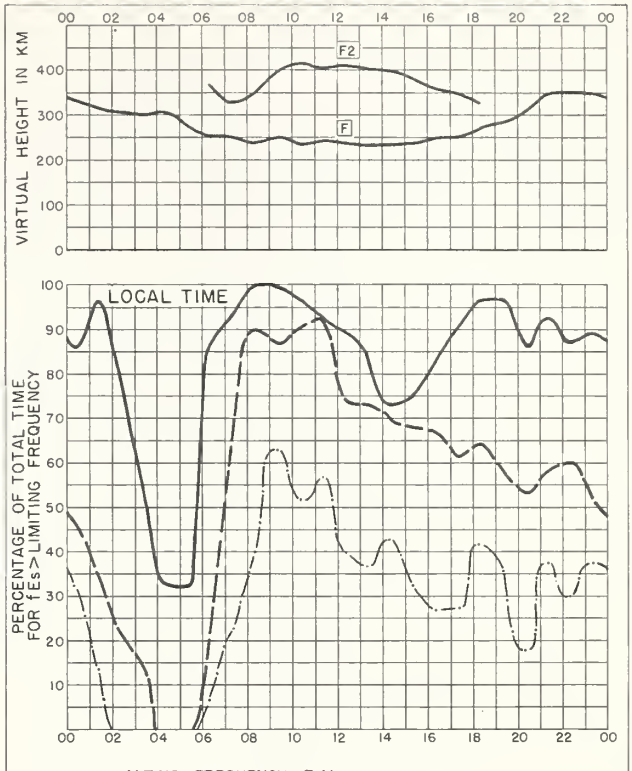


Fig. 114. TOKYO, JAPAN JULY 1958

NBS 490

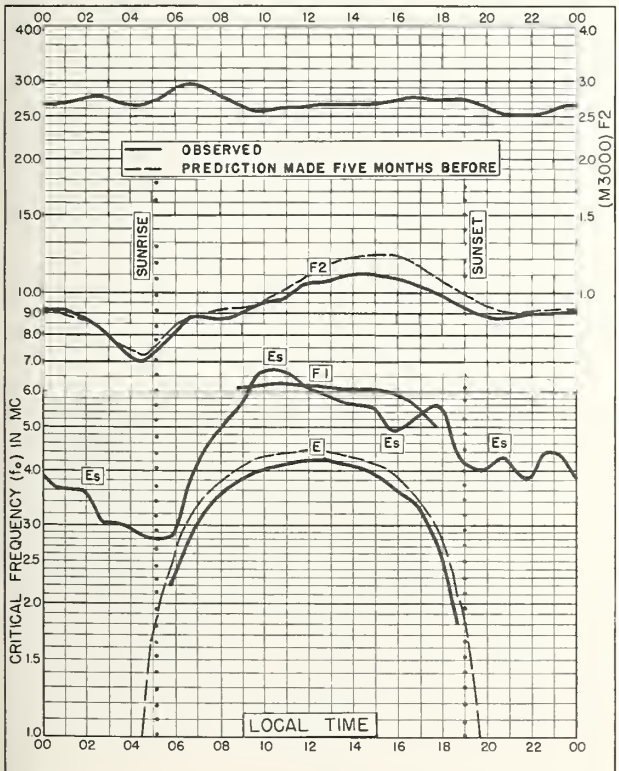


Fig. 115. YAMAGAWA, JAPAN
31.2°N, 130.6°E JULY 1958

NBS 503

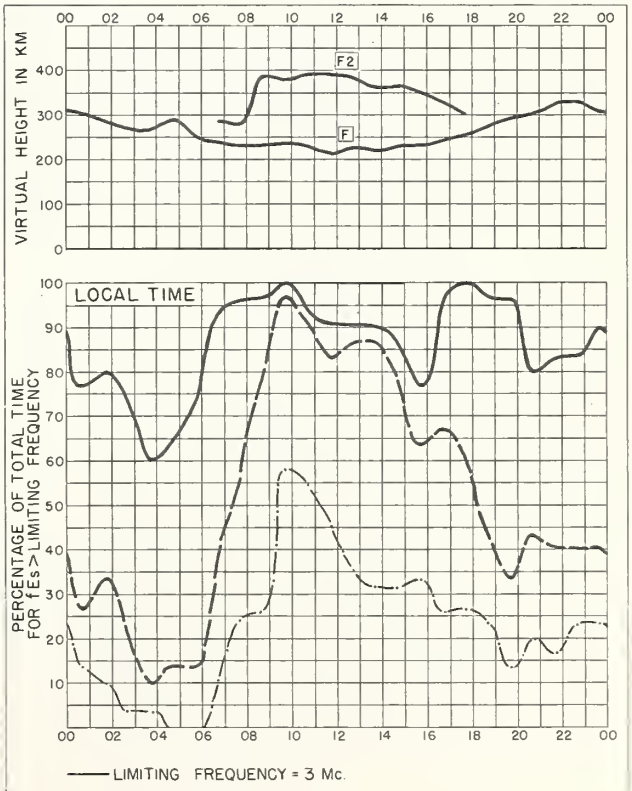


Fig. 116. YAMAGAWA, JAPAN JULY 1958

NBS 490

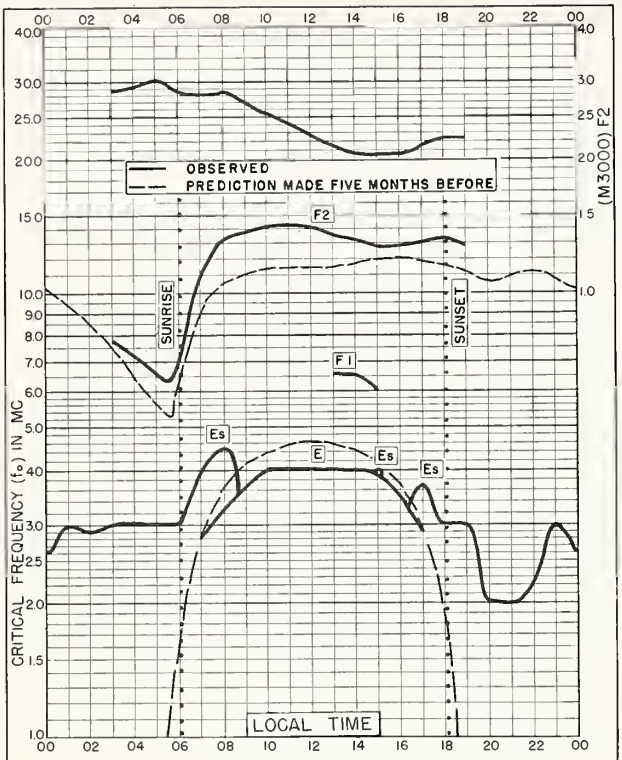


Fig. 117. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E JULY 1958

NBS 503

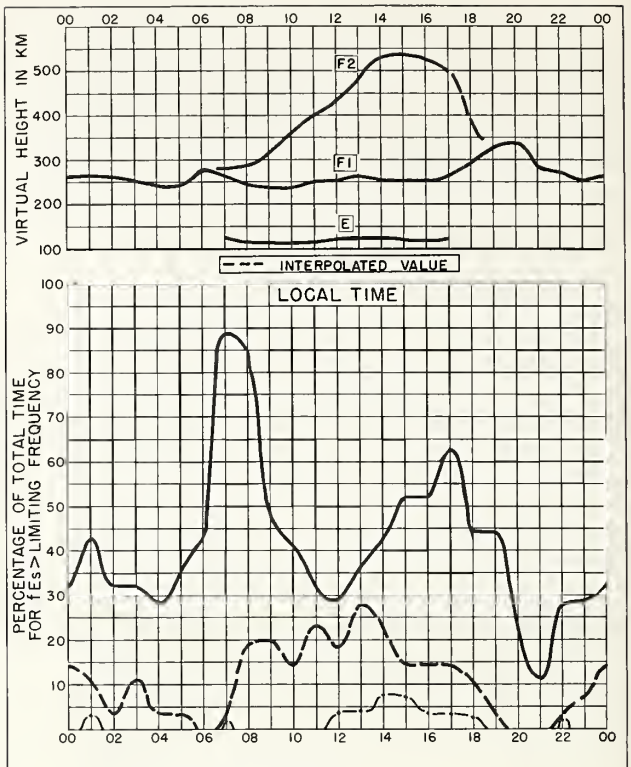


Fig. 118. BUNIA, BELGIAN CONGO JULY 1958

NBS 490

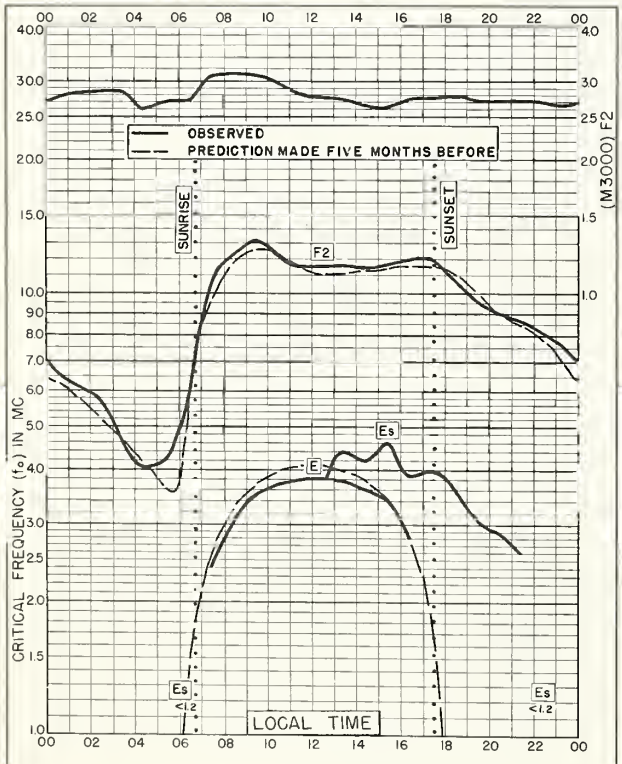


Fig. 119. RAROTONGA I.
21.2°S, 159.8°W JULY 1958

NBS 503

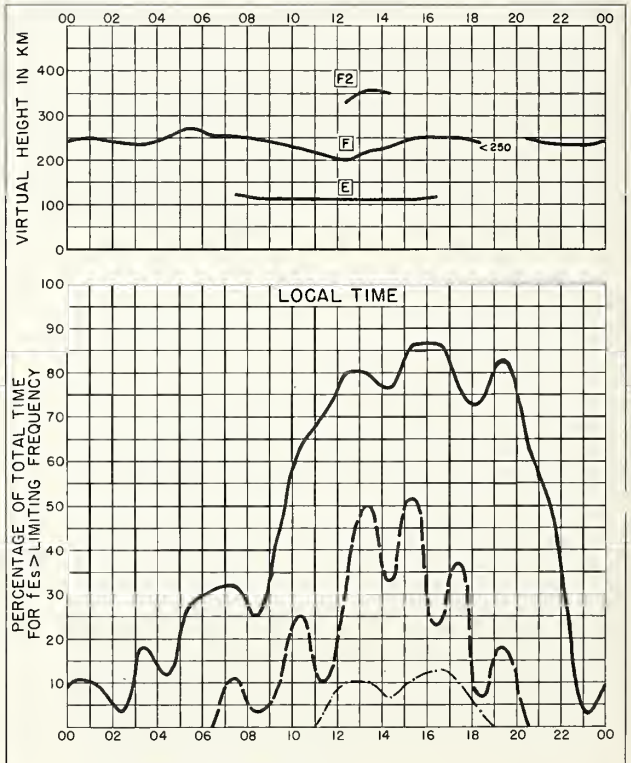


Fig. 120. RAROTONGA I. JULY 1958

NBS 490

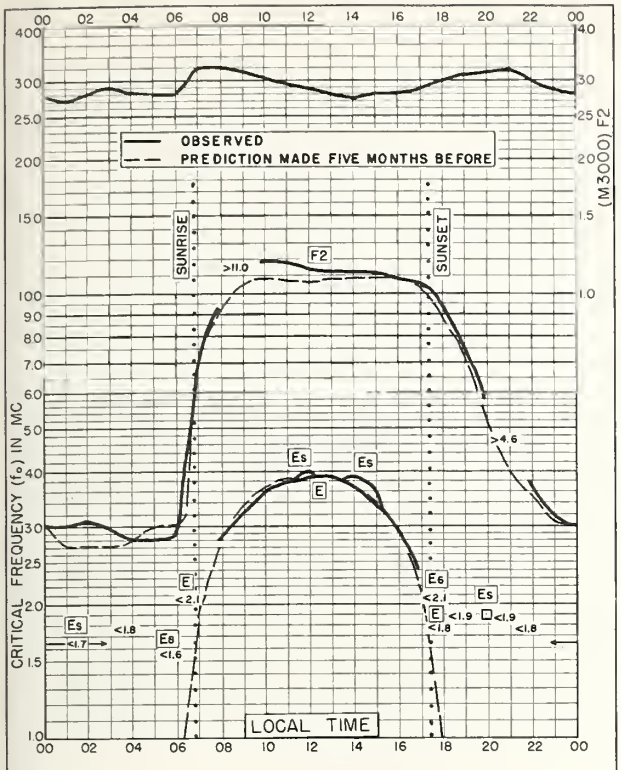
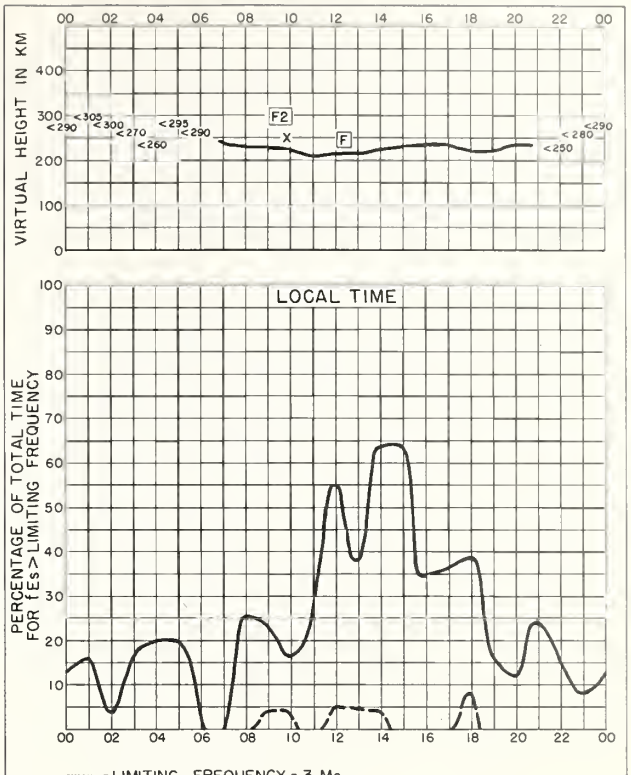


Fig. 121. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.0°E JULY 1958

NBS 503



JULY 1958

Fig. 122. JOHANNESBURG, UNION OF S. AFRICA

NBS 490

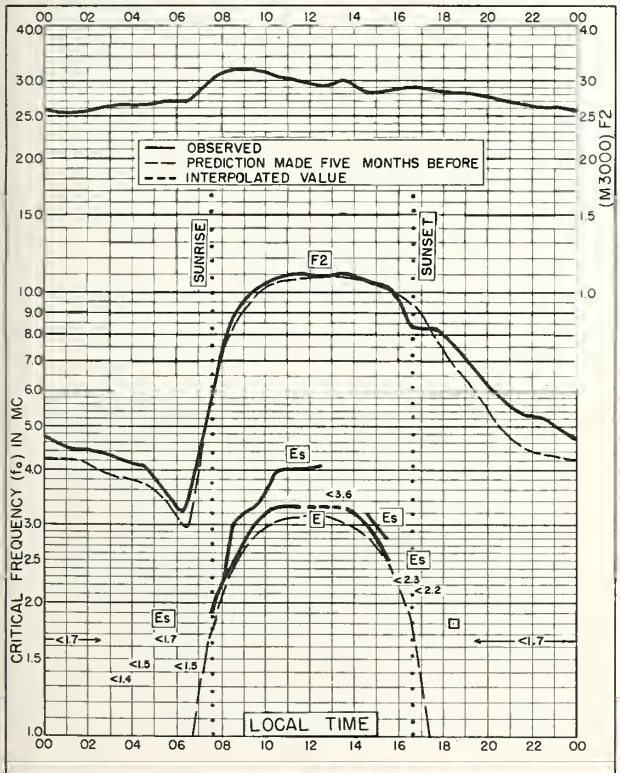


Fig. 123. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E JULY 1958

NBS 503

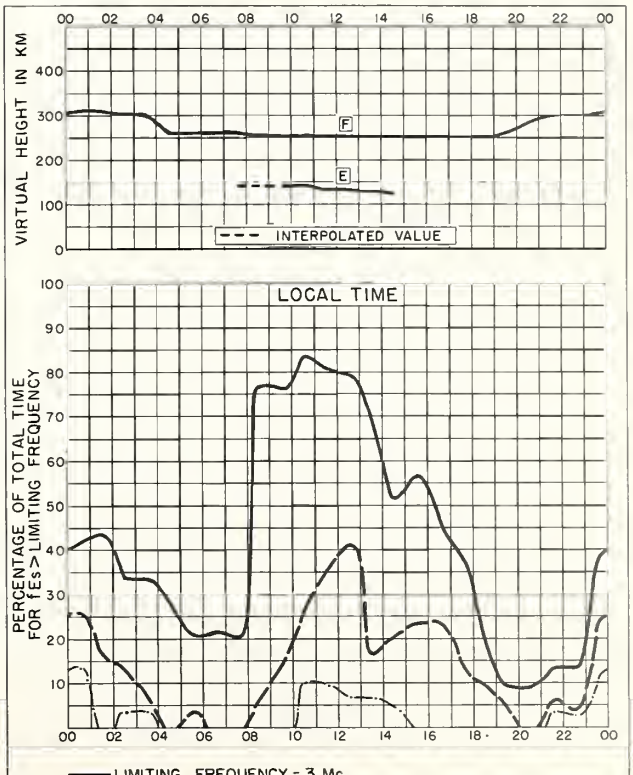


Fig. 124. CHRISTCHURCH, NEW ZEALAND JULY 1958

NBS 490

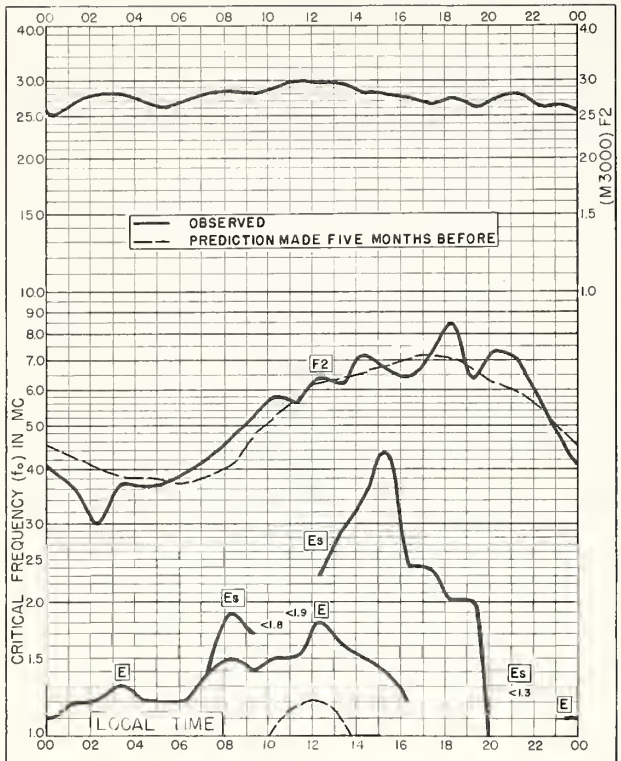


Fig. 125. CAPE HALLETT
72.3°S, 170.3°E JULY 1958

NBS 503

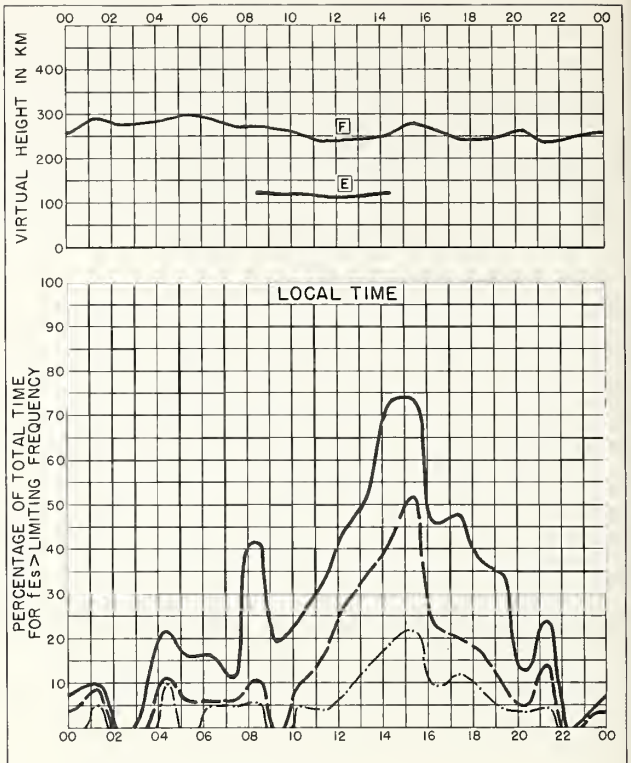


Fig. 126. CAPE HALLETT JULY 1958

NBS 490

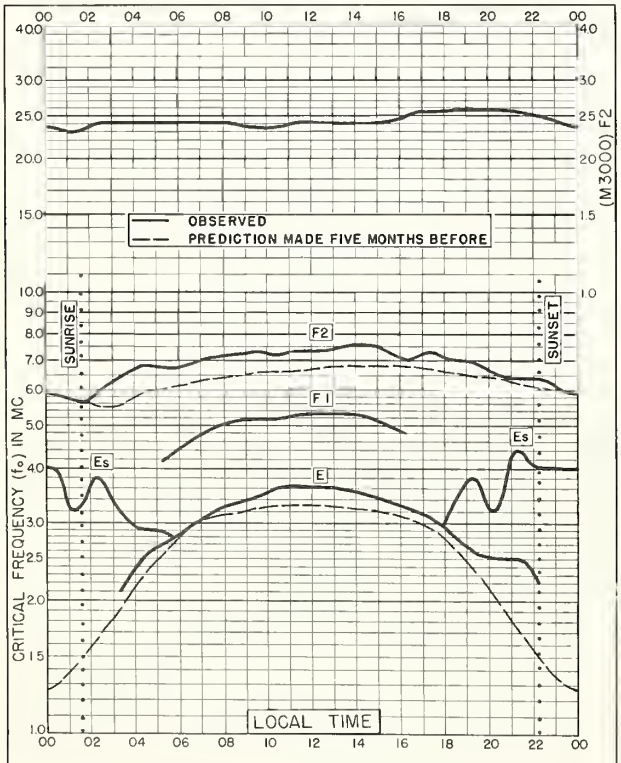


Fig. 127. TROMSO, NORWAY
69.7°N, 19.0°E MAY 1958

NBS 503

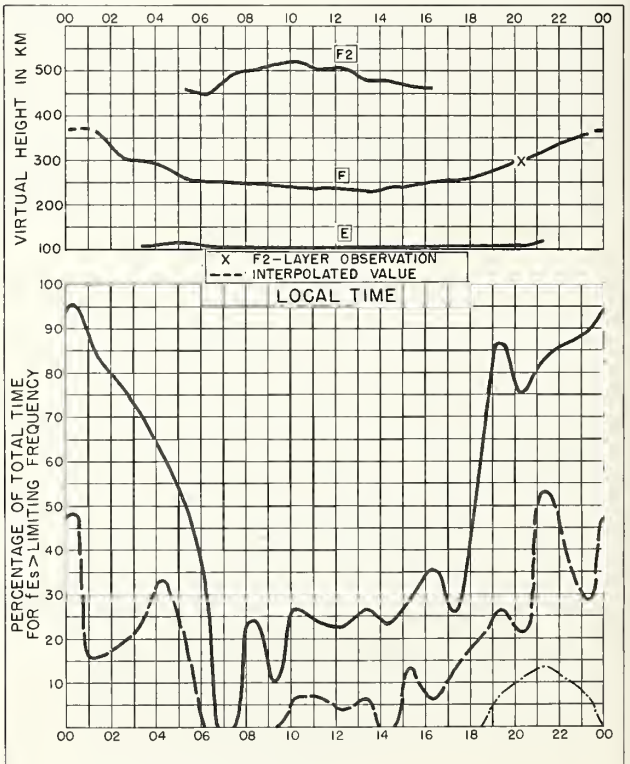


Fig. 128. TROMSO, NORWAY MAY 1958

NBS 490

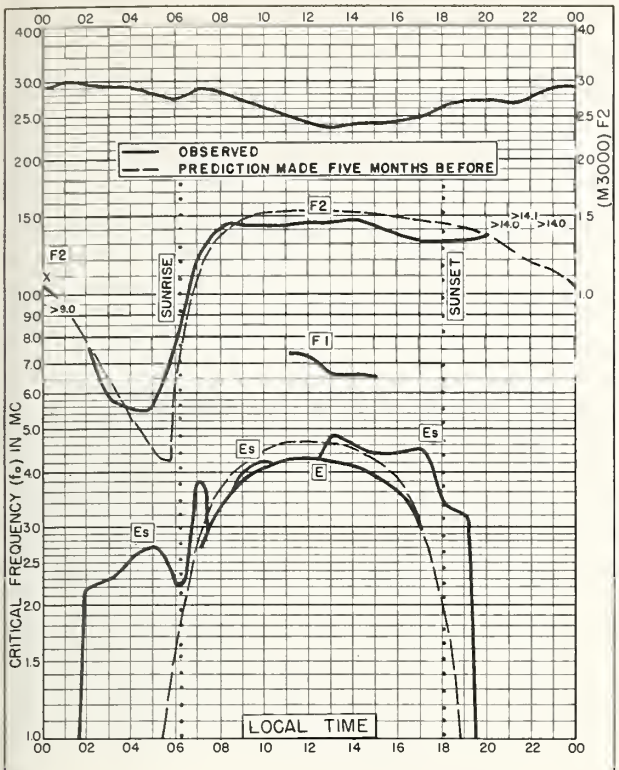


Fig. 129. BOGOTA, COLOMBIA
4.5°N, 74.2°W JANUARY 1958

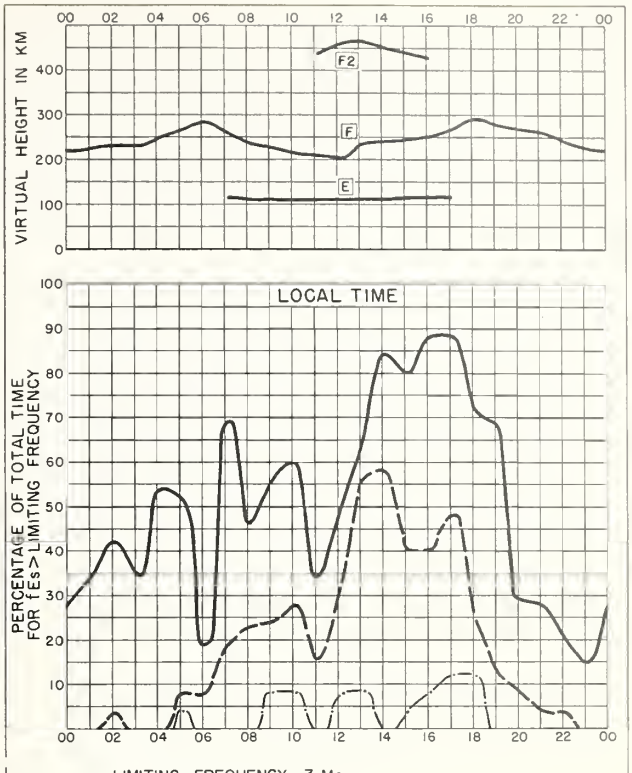


Fig. 130. BOGOTA, COLOMBIA JANUARY 1958

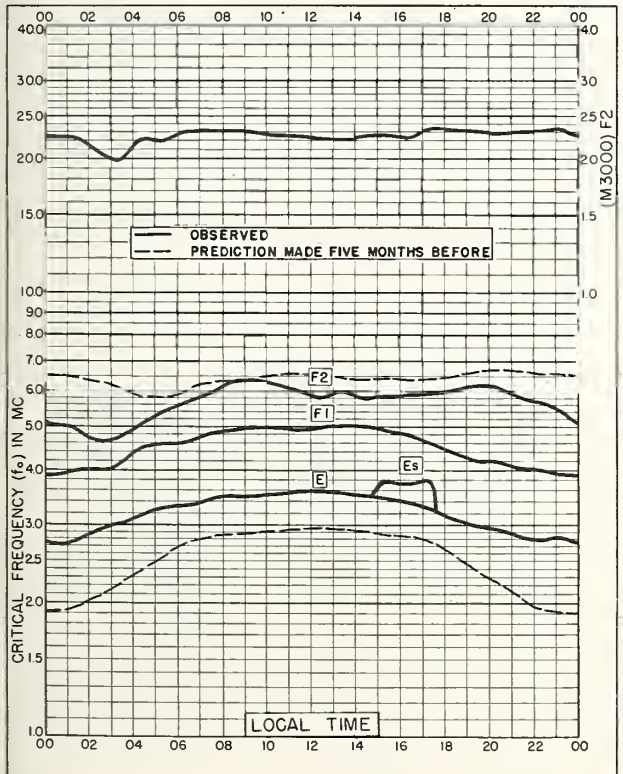


Fig. 131. LITTLE AMERICA
78.2°S, 162.2°W DECEMBER 1957

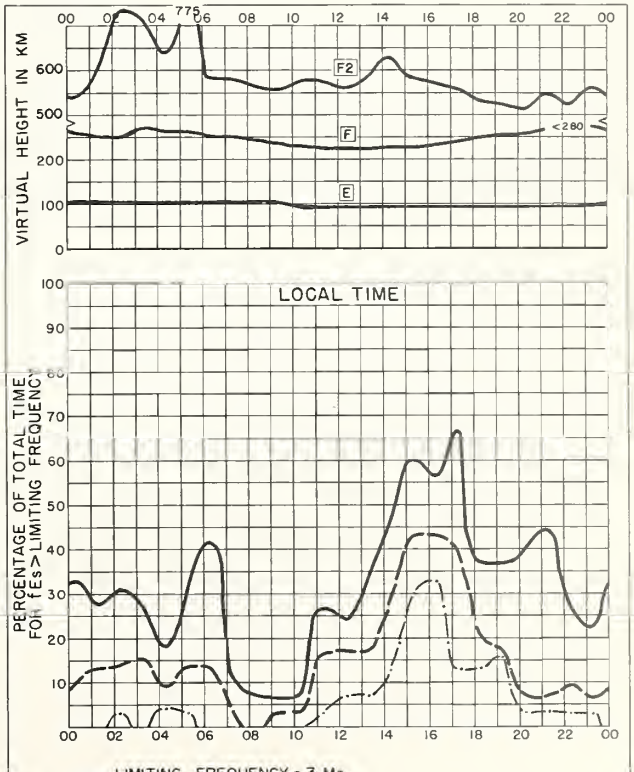


Fig. 132. LITTLE AMERICA DECEMBER 1957

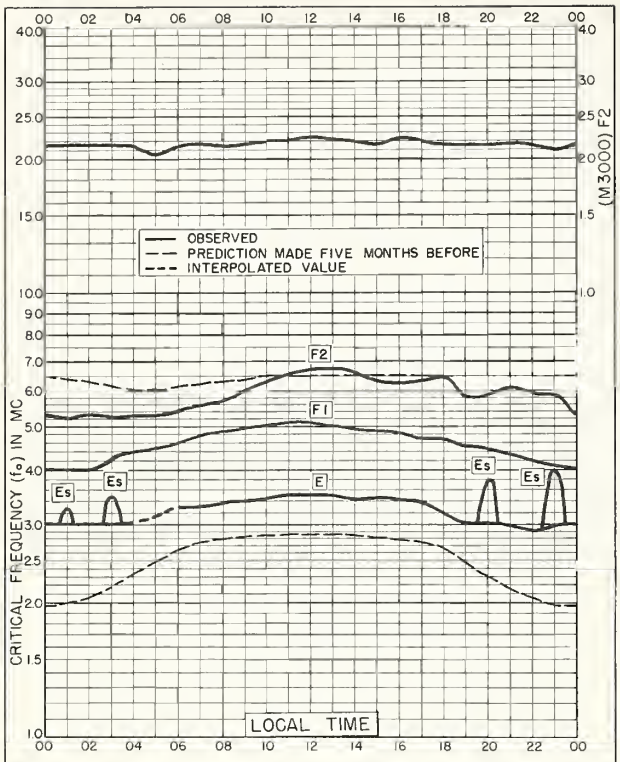


Fig. 133. BYRD STATION
80.0°S, 120.0°W DECEMBER 1957

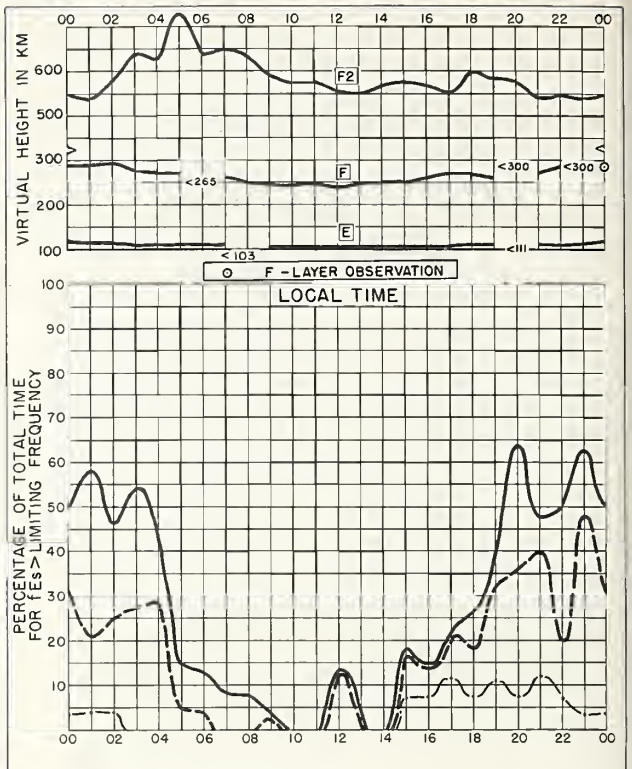


Fig. 134. BYRD STATION DECEMBER 1957

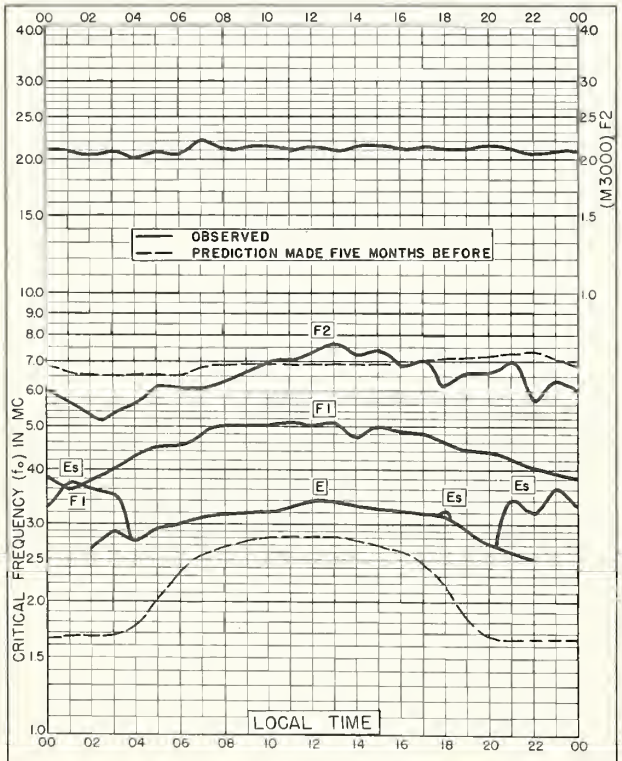


Fig. 135. BYRD STATION
80.0°S, 120.0°W NOVEMBER 1957

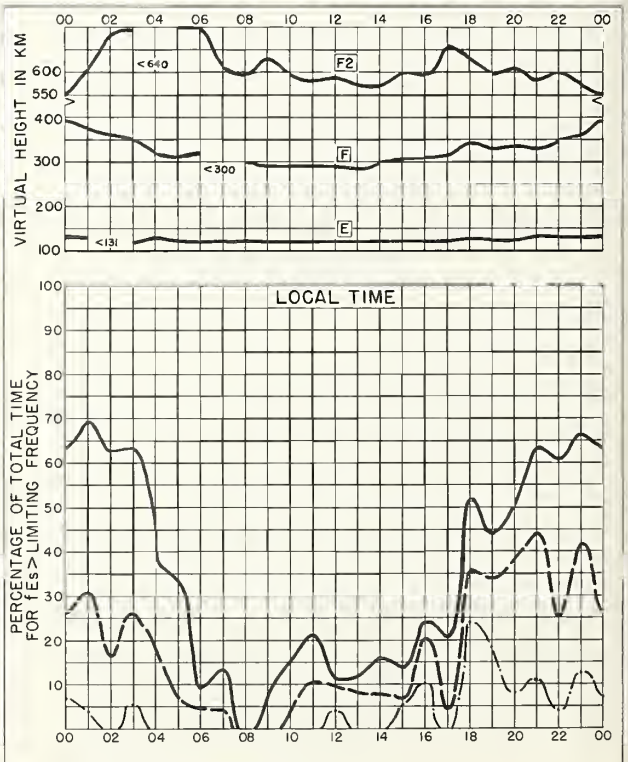


Fig. 136. BYRD STATION NOVEMBER 1957

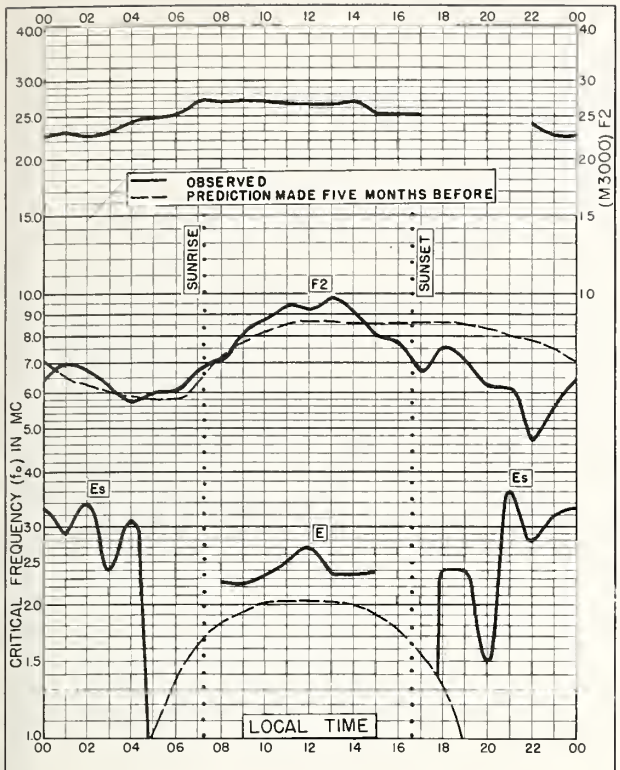


Fig. 137. BYRD STATION
80.0°S, 120.0°W SEPTEMBER 1957

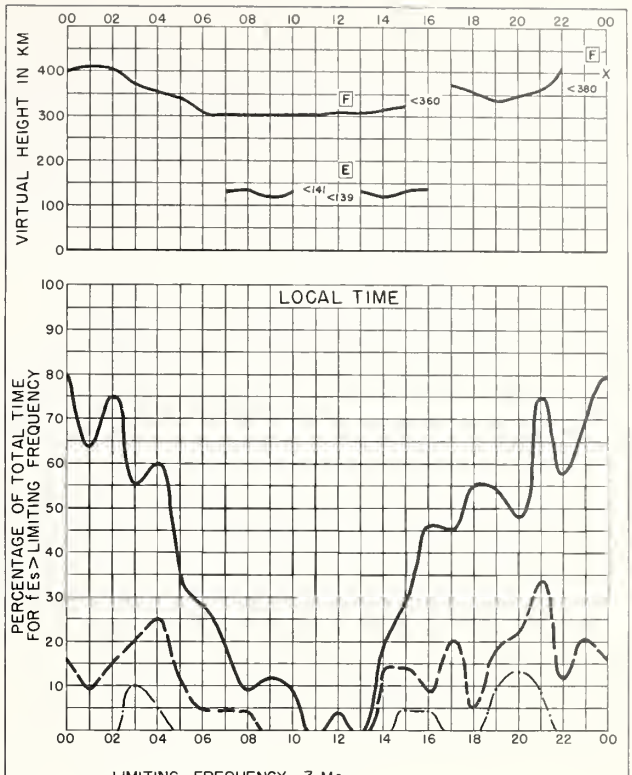


Fig. 138. BYRD STATION SEPTEMBER 1957

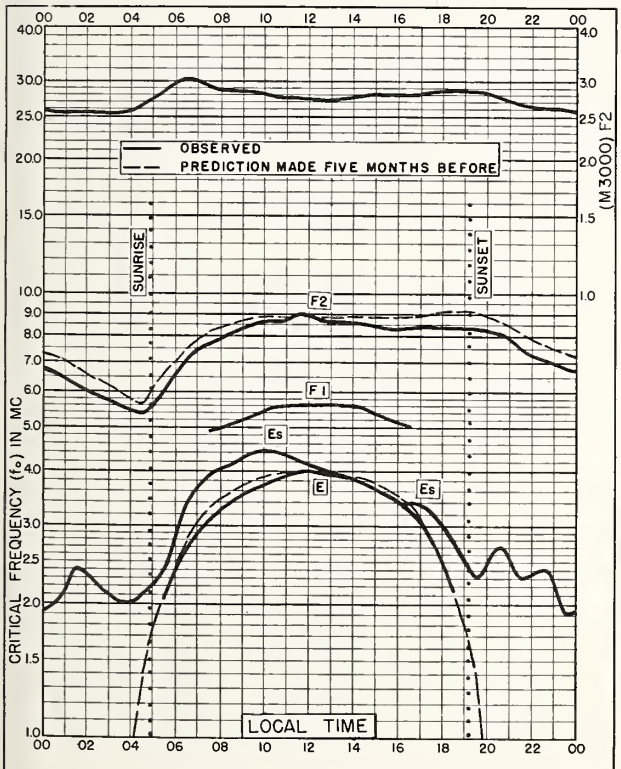


Fig. 139. FREIBURG, GERMANY
48.1°N, 7.6°E AUGUST 1957

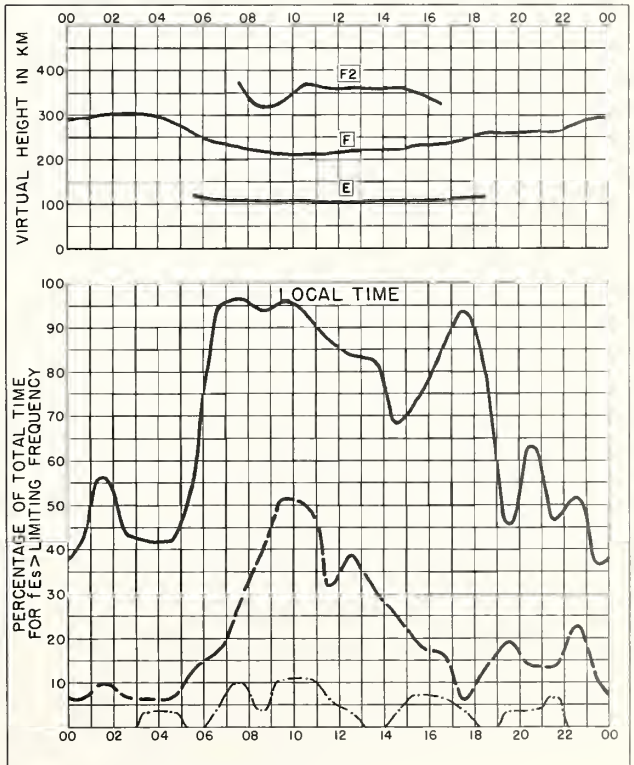


Fig. 140. FREIBURG, GERMANY AUGUST 1957

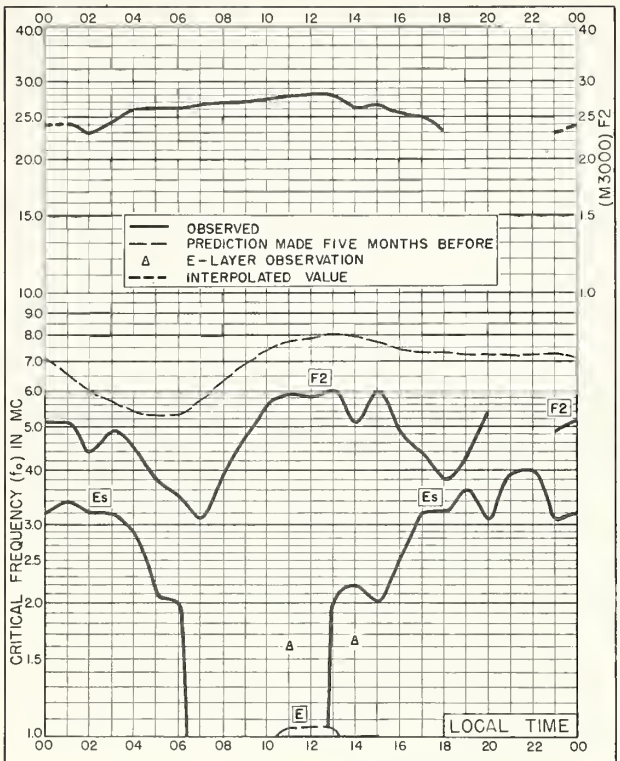


Fig. 141. BYRD STATION
80.0°S, 120.0°W AUGUST 1957

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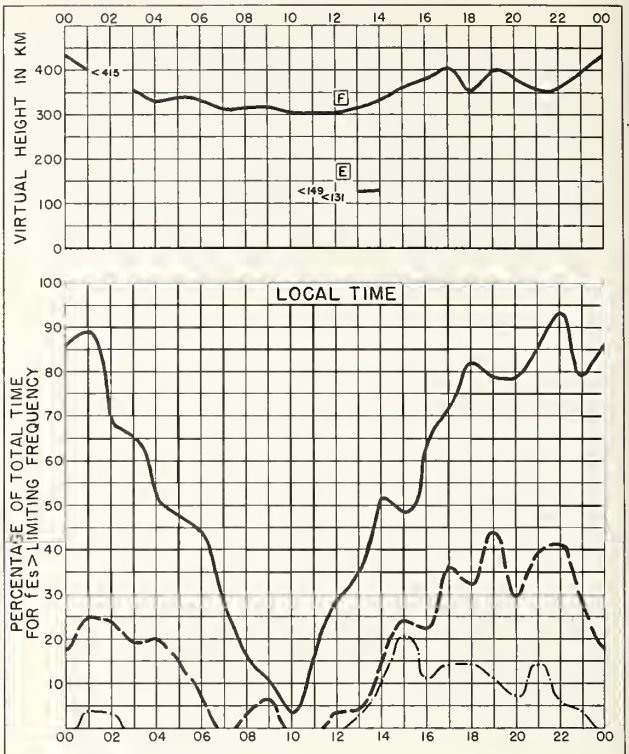

Fig. 142. BYRD STATION AUGUST 1957

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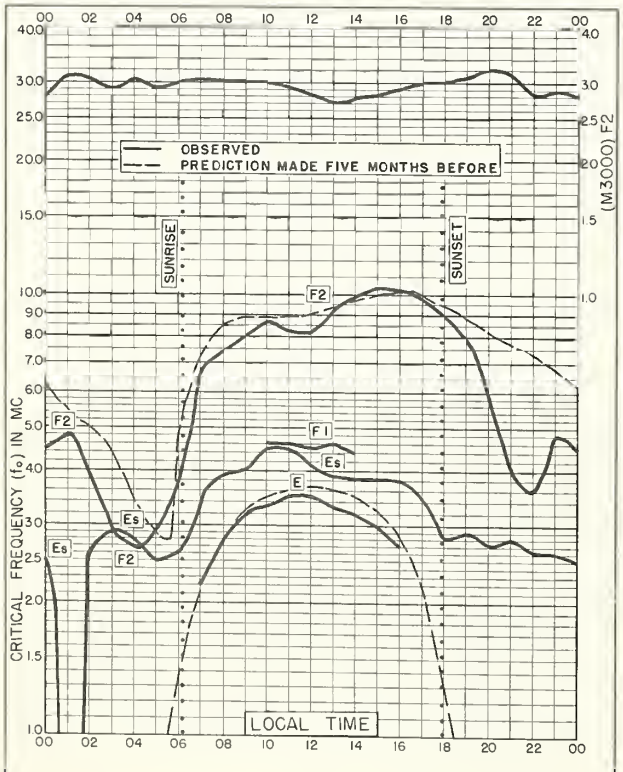

Fig. 143. LEOPOLDVILLE, BELGIAN CONGO
4.3°S, 15.3°E JUNE 1952

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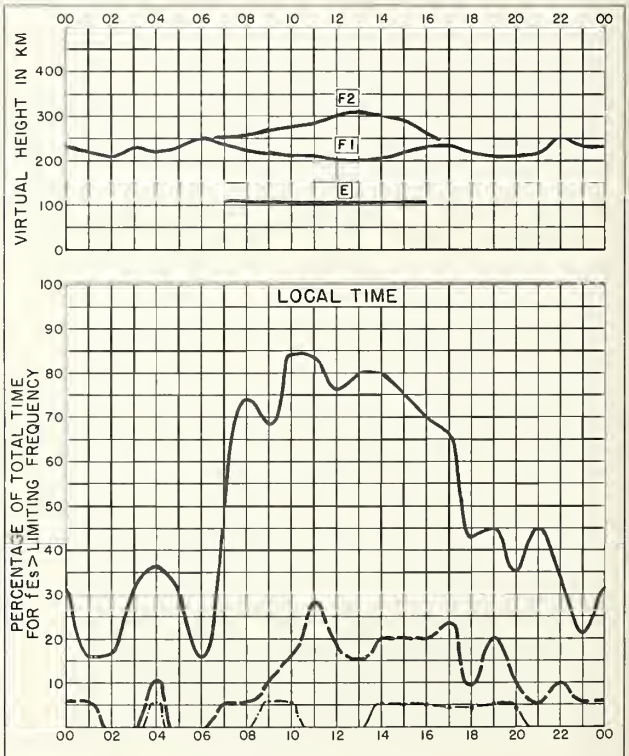

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